

Copyright, 1874, by Cambridgeport Diary Co.

THE

STANDARD

DIARY



PUBLISHED
FOR
THE TRADE

CALENDAR.

1893.

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.		Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
	..	..	..	..	..	..	..		..	..	..	..	..	..	I
JAN.	1	2	3	4	5	6	7		2	3	4	5	6	7	8
	8	9	10	11	12	13	14		9	10	11	12	13	14	15
	15	16	17	18	19	20	21		16	17	18	19	20	21	22
	22	23	24	25	26	27	28		23	24	25	26	27	28	29
	29	30	31	..	..	..	..		30	31	..	..	..	..	..
	..	..	..	I	2	3	4		..	..	I	2	3	4	5
FEB.	5	6	7	8	9	10	11		6	7	8	9	10	11	12
	12	13	14	15	16	17	18		13	14	15	16	17	18	19
	19	20	21	22	23	24	25		20	21	22	23	24	25	26
	26	27	28	..	..	..	..		27	28	29	30	31	..	..
	..	..	..	I	2	3	4		..	..	..	..	..	I	2
MAR.	5	6	7	8	9	10	11		3	4	5	6	7	8	9
	12	13	14	15	16	17	18		10	11	12	13	14	15	16
	19	20	21	22	23	24	25		17	18	19	20	21	22	23
	26	27	28	29	30	31	..		24	25	26	27	28	29	30
	..	..	..	..	..	..	I		..	..	..	..	..	..	..
APRIL.	2	3	4	5	6	7	8		I	2	3	4	5	6	7
	9	10	11	12	13	14	15		8	9	10	11	12	13	14
	16	17	18	19	20	21	22		15	16	17	18	19	20	21
	23	24	25	26	27	28	29		22	23	24	25	26	27	28
	30	..	..	..	..	..	..		29	30	31	..	..	..	..
	..	I	2	3	4	5	6		..	..	..	I	2	3	4
MAY.	7	8	9	10	11	12	13		5	6	7	8	9	10	11
	14	15	16	17	18	19	20		12	13	14	15	16	17	18
	21	22	23	24	25	26	27		19	20	21	22	23	24	25
	28	29	30	31	..	..	..		26	27	28	29	30	..	..
	..	..	..	..	I	2	3		..	..	..	..	..	I	2
JUNE.	4	5	6	7	8	9	10		3	4	5	6	7	8	9
	11	12	13	14	15	16	17		10	11	12	13	14	15	16
	18	19	20	21	22	23	24		17	18	19	20	21	22	23
	25	26	27	28	29	30	..		24	25	26	27	28	29	30
	..	..	..	..	..	..	..		31	..	..	..	..	..	..

DECEMBER.	..	..	..	..	..	..	..		..	..	..	..	..	..	..

WEIGHTS AND MEASURES.

MEASURE OF LENGTH.

4	In. make 1 Hand.	3	Feet make 1 Yard.
7.92	In. " 1 Link.	5½	Yds. " 1 Rod or Pole
18	In. " 1 Cubit.	40	Poles " 1 Furlong.
12	In. " 1 Foot.	8	Fur. " 1 Mile.
6	Ft. " 1 Fathom.	69	1-6 Miles make 1 Degree.
60 Geographical Miles make 1 Degree.			
1760 Yards } = 1 Mile.			
5280 Feet }			

MEASURE OF SURFACE.

144	Square Inches make 1 Square Foot.	1	Square Foot.
9	Square Feet " 1 Square Yard.	1	Square Yard.
30¼	Square Yards " 1 Rod, Perch or Pole.	1	Rod, Perch or Pole.
40	Square Rods " 1 Square Rood.	1	Square Rood.
4	Square Roods " 1 Square Acre.	1	Square Acre.
10	Square Chains " 1 Square Acre.	1	Square Acre.
640	Square Acres " 1 Square Mile.	1	Square Mile.
Gunter's Chain equal to 22 Yards or 100 Links.			
272¼ Square Feet make 1 Square Rod.			
43,560 Square Feet " 1 Acre.			

MEASURE OF SOLIDITY.

1728	Cubic Inches make 1 Cubic Foot.	1	Cubic Foot.
27	Cubic Feet " 1 Cubic Yard.	1	Cubic Yard.

AVOIRDUPOIS WEIGHT.

27½	Grains make 1 Drachm (dr.) or 27½ Grains.	1	Drachm (dr.) or 27½ Grains.
16	Drachms " 1 Ounce (oz.) or 437½ "	1	Ounce (oz.) or 437½ "
16	Ounces " 1 Pound (lb.) or 7000 "	1	Pound (lb.) or 7000 "
28	Pounds " 1 Quarter (qr.)	1	Quarter (qr.)
4	Quarters " 1 Hundred-Weight (cwt.)	1	Hundred-Weight (cwt.)
20	Cwts. " 1 Ton.	1	Ton.
2240	Pounds " 1 Ton.	1	Ton.

TROY WEIGHT.

24	Grains make 1 Pennyweight, or 24 Grains.	1	Pennyweight, or 24 Grains.
20	Pennywts. " 1 Ounce, or 480 "	1	Ounce, or 480 "
12	Ounces " 1 Pound, or 5760 "	1	Pound, or 5760 "

APOTHECARIES' WEIGHT.

20	Grains make 1 Scruple.	8	Drachms make 1 Ounce.
3	Scruples " 1 Drachm.	12	Ounces " 1 Pound.

DIAMOND WEIGHT.

16	Parts make 1 Grain (4-5ths Grain Troy.)	1	Grain (4-5ths Grain Troy.)
4	Grains " 1 Carat (3 1-5ths Grains Troy.)	1	Carat (3 1-5ths Grains Troy.)

LIQUID MEASURE.

4	Gills make 1 Pint.	31½	Gallons make 1 Barrel.
2	Pints " 1 Quart.	54	Gallons " 1 Hhd.
4	Quarts " 1 Gallon.	252	Gallons " 1 Tun.

DRY MEASURE.

8	Quarts make 1 Peck.	8	Bushels make 1 Quarter.
4	Pecks " 1 Bushel.	36	Bushels " 1 Chaldron.
1 Bushel equal to 2150.42 cubic inches.			

WEIGHT PER BUSHEL OF GRAIN, ETC.

The following Table shows the number of pounds per bushel required, by law or custom, in the sale of articles specified, in the several States of the Union.

STATES.	Barley.	Buckwheat.	Coal.	Corn, shel'd	Corn Meal.	Onions.	Oats.	Potatoes.	Rye.	Wheat.	Salt.	Turnips.	Beans, wh.	Clover S'd.	Timothy.
Maine	48	48	..	56	50	52	30	60	..	60	..	50	64	..	..
N. Hampshire. . . . .	..	..	..	56	50	..	30	60	56	60	..	..	60	..	..
Vermont.....	48	48	..	..	..	..	32	60	56	60	70	..	64	60	42
Massachusetts.	48	48	..	56	50	52	32	60	56	60	..	..	..	..	..
Connecticut... . . . .	..	45	..	56	..	..	32	60	56	56	..	..	..	..	..
New York.....	48	48	..	58	..	..	32	60	56	60	..	..	62	60	44
New Jersey...	48	50	..	56	..	..	30	60	56	60	..	..	..	64	..
Pennsylvania..	47	48	..	56	..	..	30	56	56	60	85	..	..	62	..
Delaware.....	..	..	..	56	..	..	..	..	..	60	..	..	..	..	..
Maryland.....	48	48	..	56	..	57	32	60	56	60	56	..	62	64	45
Dist. Columbia	47	48	..	56	48	57	32	56	56	60	50	55	62	60	45
Virginia.....	48	48	..	56	50	..	32	60	56	60	..	56	60	64	45
West Virginia.	48	52	80	56	48	..	32	60	56	60	..	60	60	60	45
North Carolina	48	50	..	54	46	..	30	..	56	60	..	..	..	64	..
South Carolina	48	56	80	56	50	57	33	60	56	60	50	..	60	60	..
Georgia.....	40	..	80	56	48	57	35	56	..	60	56	..	..	60	45
Louisiana.....	32	..	..	56	..	..	32	..	..	60	..	..	..	..	..
Arkansas.....	48	52	80	56	50	57	32	60	56	60	50	..	60	60	45
Tennessee.....	48	50	..	56	50	56	32	60	56	60	..	..	60	..	45
Kentucky.....	48	52	..	56	50	57	33	56	56	60	50	..	60	60	45
Ohio.....	48	50	..	56	..	..	32	60	56	60	..	..	60	60	45
Michigan.....	48	48	80	56	..	54	32	60	56	60	56	58	60	60	45
Indiana.....	48	50	70	56	50	48	32	60	56	60	50	..	60	60	..
Illinois.....	48	52	..	56	48	57	32	60	56	60	50	..	60	60	..
Wisconsin.....	48	50	..	56	..	..	32	60	56	60	..	..	..	60	..
Minnesota.....	48	42	..	56	..	..	32	60	56	60	..	..	..	60	..
Iowa.....	48	52	..	56	..	57	33	60	56	60	50	..	60	60	45
Missouri.....	48	52	..	56	..	57	32	60	56	60	50	..	60	60	45
Kansas.....	50	50	..	56	50	57	32	60	56	60	50	55	60	..	45
Nebraska.....	48	52	..	56	50	57	34	60	56	60	50	55	60	60	45
California.....	50	40	..	52	..	..	32	..	54	60	..	..	..	..	..
Oregon.....	46	42	..	56	..	..	36	60	56	60	..	..	..	60	..

INTEREST TABLE.

FOUR PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	11
3 "	0	0	0	0	0	0	0	0	0	1/2	3 1/2	33
5 "	0	0	0	0	0	0	0	1/2	1/2	1/2	5 1/2	56
10 "	0	0	0	1/2	1/2	1/2	1	1	1	1	11	111
1 Mo.	0	1/2	1	1 1/2	1 1/2	2	2 1/2	2 1/2	3	3 1/2	33	333
2 "	1/2	1 1/2	2	2 1/2	3 1/2	4	4 1/2	5 1/2	6	6 1/2	67	667
3 "	1	2	3	4	5	6	7	8	9	10	100	1000
4 "	1 1/2	2 1/2	4	5 1/2	6 1/2	8	9 1/2	10 1/2	12	13 1/2	133	1333
5 "	1 1/2	3 1/2	5	6 1/2	8 1/2	10	11 1/2	13 1/2	15	16 1/2	167	1667
6 "	2	4	6	8	10	12	14	16	18	20	200	2000
7 "	2 1/2	4 1/2	7	9 1/2	11 1/2	14	16 1/2	18 1/2	21	23 1/2	233	2333
8 "	2 1/2	5 1/2	8	10 1/2	13 1/2	16	18 1/2	21 1/2	24	26 1/2	267	2667
9 "	3	6	9	12	15	18	21	24	27	30	300	3000
10 "	3 1/2	6 1/2	10	13 1/2	16 1/2	20	23 1/2	26 1/2	30	33 1/2	333	3333
11 "	3 1/2	7 1/2	11	14 1/2	18 1/2	22	25 1/2	29 1/2	33	36 1/2	367	3667
1 Yr.	4	8	12	16	20	24	28	32	36	40	400	4000

FIVE PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	14
3 "	0	0	0	0	0	0	0	0	0	0	4	42
5 "	0	0	0	0	0	0	0	1	1	1	7	69
10 "	0	0	0	1/2	1	1	1	1	1	1 1/2	14	139
1 Mo.	1/2	1	1	2	2	3	3	3	4	4	42	417
2 "	1	1 1/2	3	3	4	5	6	7	8	8	83	833
3 "	1	2 1/2	4	5	6	8	9	10	11	13	125	1250
4 "	1 1/2	3	5	7	8	10	12	13	15	17	167	1667
5 "	2	4	6	8	10	13	15	17	19	21	208	2083
6 "	2 1/2	5	8	10	13	15	18	20	23	25	250	2500
7 "	3	6	9	12	15	18	20	23	26	29	292	2917
8 "	3	7	10	13	17	20	23	27	30	33	333	3333
9 "	3 1/2	7 1/2	11	15	19	23	26	30	34	38	375	3750
10 "	4	8	13	17	21	25	29	33	38	42	417	4167
11 "	4 1/2	9	14	18	23	28	32	37	41	46	458	4583
1 Yr.	5	10	15	20	25	30	35	40	45	50	500	5000

SIX PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	2	17
3 "	0	0	0	0	0	0	0	0	0	1	5	50
5 "	0	0	0	0	0	1/2	1	1	1	1	8	83
10 "	0	0	1	1	1	1	1	1	2	2	17	167
1 Mo.	1/2	1	2	2	3	3	4	4	5	5	50	500
2 "	1	2	3	4	5	6	7	8	9	10	100	1000
3 "	1 1/2	3	5	6	8	9	11	12	14	15	150	1500
4 "	2	4	6	8	10	12	14	16	18	20	200	2000
5 "	2 1/2	5	8	10	13	15	18	20	23	25	250	2500
6 "	3	6	9	12	15	18	21	24	27	30	300	3000
7 "	3 1/2	7	11	14	18	21	25	28	32	35	350	3500
8 "	4	8	12	16	20	24	28	32	36	40	400	4000
9 "	4 1/2	9	14	18	23	27	32	36	41	45	450	4500
10 "	5	10	15	20	25	30	35	40	45	50	500	5000
11 "	5 1/2	11	17	22	28	33	39	44	50	55	550	5500
1 Yr.	6	12	18	24	30	36	42	48	54	60	600	6000

RATE OF INCOME ON STOCKS.

Purchased at the following prices, (par value being \$100), and bearing interest at the following rates.

Paid.	3%	4%	5%	6%	7%	8%	9%
\$50	6 00	8 00	10 00	12 00	14 00	16 00	18 00
55	5 45	7 27	9 09	10 90	12 72	14 55	16 36
60	5 00	6 67	8 33	10 00	11 66	13 33	15 00
65	4 62	6 15	7 69	9 23	10 76	12 30	13 85
70	4 28	5 71	7 14	8 57	10 00	11 42	12 85
75	4 00	5 33	6 66	8 00	9 33	10 66	12 00
80	3 75	5 00	6 25	7 50	8 75	10 00	11 25
85	3 53	4 70	5 88	7 05	8 23	9 41	10 58
90	3 33	4 44	5 55	6 66	7 77	8 88	10 00
91	3 30	4 40	5 49	6 59	7 69	8 79	9 89
92	3 26	4 34	5 43	6 52	7 60	8 70	9 78
93	3 23	4 30	5 38	6 45	7 53	8 60	9 68
94	3 19	4 26	5 32	6 38	7 45	8 51	9 57
95	3 15	4 21	5 26	6 31	7 36	8 42	9 47
96	3 13	4 17	5 21	6 25	7 29	8 33	9 38
97	3 09	4 12	5 15	6 18	7 22	8 25	9 28
98	3 06	4 08	5 10	6 12	7 14	8 16	9 18
99	3 03	4 04	5 05	6 06	7 07	8 08	9 09
101	2 97	3 96	4 95	5 94	6 93	7 92	8 91
102	2 94	3 92	4 90	5 88	6 86	7 84	8 82
103	2 91	3 88	4 85	5 83	6 80	7 77	8 74
104	2 88	3 85	4 81	5 77	6 73	7 69	8 65
105	2 86	3 80	4 76	5 71	6 66	7 61	8 57
106	2 83	3 77	4 72	5 66	6 60	7 55	8 49
107	2 80	3 74	4 67	5 61	6 54	7 48	8 41
108	2 78	3 70	4 63	5 56	6 48	7 41	8 33
109	2 75	3 67	4 59	5 50	6 42	7 34	8 26
110	2 72	3 63	4 54	5 45	6 36	7 27	8 18
115	2 60	3 48	4 34	5 21	6 08	6 95	7 83
120	2 50	3 33	4 16	5 00	5 83	6 66	7 50
130	2 30	3 07	3 84	4 61	5 38	6 15	6 92
140	2 14	2 86	3 57	4 28	5 00	5 71	6 43
150	2 00	2 67	3 33	4 00	4 66	5 33	6 00
160	1 88	2 50	3 12	3 75	4 38	5 00	5 62
170	.	.	.	3 53	4 12	4 70	5 29
180	.	.	.	3 33	3 88	4 44	5 00
190	.	.	.	3 16	3 68	4 21	4 74
200	.	.	.	3 00	3 50	4 00	4 50

RATES OF POSTAGE.

POSTAL CARDS, 1 cent each, go without further charge to all parts of the United States and Canada. Cards for foreign countries (within the Postal Union) 2 cents each. *Postal Cards are unmailable* with any writing or printing on the address side, except the direction, or with anything pasted upon or attached to them.

ALL LETTERS, to all parts of the United States and Canada, 2 cents for each ounce or fraction thereof.

LOCAL, OR "DROP" LETTERS, that is, for the city or town where deposited, 2 cents where the carrier system is adopted, and 1 cent where there is no carrier system.

FIRST CLASS.—Letters and all other written matter, *whether sealed or unsealed*, and all other matter *scaled, nailed, sewed, tied, or fastened in any manner* so that it cannot be easily examined, 2 cents for each ounce or fraction thereof.

SECOND CLASS.—Only for publishers and news-agents; 1 cent per pound.

NEWSPAPERS and Periodicals (regular publications) can be mailed by the public at the rate of 1 cent for each 4 ounces or fraction thereof.

THIRD CLASS.—Printed matter, in *unsealed wrappers only* (all matter inclosed in notched envelopes must pay letter rates), 1 cent for each 2 ounces or fraction thereof, *which must be fully prepaid*. This includes books, circulars, chromos, engravings, handbills, lithographs, music, pamphlets, proof-sheets and manuscript accompanying the same, reproductions by the electric pen, hektograph, metallograph, papyrograph, and, in short, any reproduction upon paper by any process *except handwriting and the copying press*. Limit of weight 4 lbs., except for a single book, which may weigh more.

FOURTH CLASS.—All mailable matter not included in the three preceding classes which is so prepared for mailing as to be *easily withdrawn from the wrapper* and examined, 1 cent per ounce or fraction thereof. Limit of weight, 4 lbs. Full prepayment compulsory.

REFORWARDING.—Letters will be forwarded from one post office to another upon the *written* request of the *person addressed*, without additional postage charge; but unclaimed packages *cannot be returned to the sender* until stamps are furnished to pay the return postage.

PERMISSIBLE WRITING.—No writing is permitted on third or fourth class matter except as follows: The name and address of sender on the outside or inside of package, preceded by the word "from." On the wrapper may also be written the names and number of articles inclosed. The sender is further allowed to mark a word or passage in a book or paper to which he desires to call special attention. He may also write a simple inscription

RATES OF POSTAGE.

or dedication upon the cover or blank leaves of a book or pamphlet. There may be attached to articles of merchandise, by tag or label, a mark, number, name, or letter for purpose of identification. Printed circulars may contain the written name of the sender, or of the addressee, and the date. Any other writing on third or fourth class matter will subject the package to letter rates of postage, and render the sender liable to a fine of ten dollars for each offense. Printed matter may be inclosed with fourth class matter, but the whole package is subject to the rate of 1 cent per ounce or fraction thereof.

POSTAL NOTES.

Upon payment of a fee of 3 cents each, Postal Notes for any amount under Five Dollars may be purchased at any Money-order Office, payable to bearer at any time within three calendar months from the last day of the month during which it was issued; but payable *only* at such Money-order Office as the purchaser may select or at the office of issue.

MONEY ORDERS.

For Orders not exceeding \$5	5 cents.
Exceeding \$5 and not exceeding \$10	8 "
" 10 " " "	15 "
" 15 " " "	30 "
" 30 " " "	40 "
" 40 " " "	50 "
" 50 " " "	60 "
" 60 " " "	70 "
" 70 " " "	80 "
" 80 " " "	100 "

When a larger sum than \$100 is required, additional Orders to make it up must be obtained.

FOREIGN POSTAGE.

The rates for letters are for the half ounce or fraction thereof, and those for newspapers for 2 ounces or fraction thereof:—

To Great Britain and Ireland, France, Spain, all parts of Germany, including Austria, Denmark, Switzerland, Italy, Russia, Norway, Sweden, Turkey (European and Asiatic), Egypt, letters 5 cents, newspapers 1 cent for each 2 ounces or fraction thereof.

To Australia, letters, via San Francisco (except to New South Wales), 5 cents; via Brindisi, 15 cents; newspapers, via San Francisco, 2 cents; via Brindisi, 4 cents. China, letters, via San Francisco, 5 cents; via Brindisi, 13 cents; 4 cents for each paper not weighing over 4 ounces. British India, Italian mail, letters 5 cents, newspapers 1 cent for 2 ounces. Japan, letters, via San Francisco, 5 cents; newspapers 1 cent for 2 ounces.

HELP! In case of Accidents.

Drowning. 1. Loosen clothing, if any. 2. Empty lungs of water by laying body on its stomach and lifting it by the middle so that the head hangs down. Jerk the body a few times. 3. Pull tongue forward, using handkerchief, or pin with string, if necessary. 4. Imitate motion of respiration by alternately compressing and expanding the lower ribs, about twenty times a minute. Alternately raising and lowering the arms from the sides up above the head will stimulate the action of the lungs. Let it be done gently but persistently. 5. Apply warmth and friction to extremities. 6. By holding tongue forward, closing the nostrils and pressing the "Adam's apple" back, (so as to close entrance to stomach), direct inflation may be tried. Take a deep breath and breathe it forcibly into the mouth of patient, compress the chest to expel the air, and repeat the operation. 7. **DON'T GIVE UP!** People have been saved after HOURS of patient, vigorous effort. 8. When breathing begins, get patient into a warm bed, give WARM drinks, or spirits in teaspoonfuls, fresh air and quiet.

Burns and Scalds. Cover with Cooking Soda and lay wet cloths over it. Whites of Eggs and Olive Oil. Olive or Linseed Oil, plain, or mixed with Chalk or Whiting.

Lightning. Dash cold water over a person struck.

Sunstroke. Loosen clothing. Get patient into shade and apply ice-cold water to head.

Mad Dog or Snake Bite. Tie cord tight above wound. Suck the wound and cauterize with caustic or white-hot iron at once, or cut out adjoining parts with a sharp knife.

Venomous Insects Stings, &c. Apply weak Ammonia, Oil, Salt Water, or Iodine.

Fainting. Place flat on back; allow fresh air and sprinkle with water.

Tests of Death. Hold mirror to mouth. If living, moisture will gather. Push pin into flesh. If dead the hole will remain, if alive it will close up.

Cinders in the Eye. Roll soft paper up like a lamp lighter and wet the tip to remove, or use a medicine dropper to draw it out. Rub the *other* eye.

Fire in one's Clothing. *Don't run*,—especially not down stairs or out of doors. Roll on carpet, or wrap in woolen rug or blanket. Keep the head down, so as not to inhale flame.

Fire in a Building. Crawl on the floor. The clearest air is the lowest in the room. Cover head with a woolen wrap, wet if possible. Cut holes for the eyes. Don't get excited

Fire in Kerosene. *Don't use water*, it will spread the flames. Dirt, sand or flour is the best extinguisher; or smother with woolen rug, table-cloth or carpet.

ANTIDOTES FOR POISONS.

First. Send for a Physician.

Second. INDUCE VOMITING, by tickling throat with feather or finger. Drinking hot water or strong Mustard and water. Swallow Sweet Oil or whites of Eggs.

Acids are antidotes for ALKALIES, and *vice versa*.

SPECIAL POISONS AND ANTIDOTES.

Acids. MURIATIC, OXALIC. } Soap-suds, Magnesia,
ACETIC. SULPHURIC (Oil of Vit- } Lime-water.
riol). NITRIC (Aqua Fortis).

Prussic Acid. } Ammonia in water. Dash water
in face.

Carbolic Acid. Flour and water, mucilaginous drinks.

Alkalies. POTASH. LYE. } Vinegar or Lemon juice in
HARTSHORN. AMMONIA. } water.

Arsenic. } Milk, Raw Eggs, Sweet Oil, Lime-
Rat Poison. } water, Flour and water.
Paris Green. }

Bug Poison. }
Lead. } Whites of Eggs or Milk in
Saltpetre. } large doses.
Corrosive Sublimate. }
Sugar of Lead. }
Blue Vitriol. }

Chloroform. } Dash cold water on head and chest.
Chloral. } Artificial respiration. Piece of ice in
Ether. } rectum.

Carbonate of Soda. } Soap-suds and mucilaginous
Copperas. } drinks.
Cobalt. }

Iodine. } Starch and water. Astringent infu-
Antimony. } sions. Strong tea.
Tartar Emetic. }

Mercury AND ITS SALTS. } Whites of Eggs. Milk.
Mucilages.

Nitrate of Silver. } Salt and water.
Lunar Caustic. }

Opium. }
Morphine. } Strong coffee, hot bath. Keep
Laudanum. } awake and moving at any
Paregoric. } cost.
Soothing Powders }
or Syrups. }

Strychnine. } Mustard and water, Sul-
Tinct. of Nux Vomica. } phate of Zinc. Absolute
quiet. Plug the ears.

POPULATION OF THE UNITED STATES.

The official count of the returns of the Eleventh
Census as finally determined.

STATES AND TERRITORIES.	1890.	1880.
Alabama.....	1,513,017	1,262,505
Alaska.....	.....	.....
Arizona.....	59,620	40,440
Arkansas.....	1,128,179	802,525
California.....	1,208,130	864,694
Colorado.....	412,198	194,327
Connecticut.....	746,258	622,700
Delaware.....	168,493	146,608
District of Columbia.....	230,392	177,624
Florida.....	391,422	269,493
Georgia.....	1,837,353	1,542,180
Idaho.....	84,385	32,610
Illinois.....	3,826,351	3,077,871
Indiana.....	2,192,404	1,978,301
Indian Territory.....	.....	.....
Iowa.....	1,911,896	1,624,615
Kansas.....	1,427,096	996,096
Kentucky.....	1,858,635	1,648,690
Louisiana.....	1,118,587	939,946
Maine.....	661,086	648,936
Maryland.....	1,042,390	934,943
Massachusetts.....	2,238,943	1,783,085
Michigan.....	2,093,889	1,636,937
Minnesota.....	1,301,826	780,773
Mississippi.....	1,289,600	1,131,597
Missouri.....	2,679,184	2,168,380
Montana.....	132,159	39,159
Nebraska.....	1,058,910	452,402
Nevada.....	45,761	62,266
New Hampshire.....	376,530	346,991
New Jersey.....	1,444,933	1,131,116
New Mexico.....	153,593	119,565
New York.....	5,997,853	5,082,871
North Carolina.....	1,617,947	1,399,750
North Dakota.....	182,719	36,909
Ohio.....	3,672,316	3,198,062
Oklahoma.....	61,834	.....
Oregon.....	313,767	174,768
Pennsylvania.....	5,258,014	4,282,891
Rhode Island.....	345,506	276,531
South Carolina.....	1,151,149	995,577
South Dakota.....	328,808	98,268
Tennessee.....	1,767,518	1,542,359
Texas.....	2,235,523	1,591,749
Utah.....	207,905	143,963
Vermont.....	332,422	332,286
Virginia.....	1,655,980	1,512,565
Washington.....	349,390	75,116
West Virginia.....	762,794	618,457
Wisconsin.....	1,686,880	1,315,497
Wyoming.....	60,705	20,789
Total population of U. S. . . .	62,622,250	50,155,783

POPULATION OF PRINCIPAL CITIES.

	1890.	1880.
Albany, N. Y.....	94,923	90,758
Allegheny, Pa.....	105,287	78,682
Atlanta, Ga.....	65,533	37,409
Baltimore, Md.....	434,439	332,313
Boston, Mass.....	448,477	362,839
Brooklyn, N. Y.....	806,343	566,663
Buffalo, N. Y.....	255,664	155,134
Cambridge, Mass.....	70,028	52,669
Camden, N. J.....	58,313	41,659
Charleston, S. C.....	54,955	49,984
Chicago, Ill.....	1,099,850	503,185
Cincinnati, O.....	296,908	255,139
Cleveland, O.....	261,353	160,146
Columbus, O.....	88,150	51,647
Dayton, O.....	61,220	38,678
Denver, Col.....	106,713	35,629
Des Moines, Ia.....	50,093	22,408
Detroit, Mich.....	205,876	116,340
Evansville, Ind.....	50,756	29,280
Fall River, Mass.....	74,398	48,961
Grand Rapids, Mich.....	60,278	32,016
Hartford, Conn.....	53,230	42,015
Indianapolis, Ind.....	105,436	75,056
Jersey City, N. J.....	163,003	120,722
Kansas City, Mo.....	132,716	55,785
Lincoln, Neb.....	55,154	13,003
Louisville, Ky.....	161,129	123,758
Lowell, Mass.....	77,696	59,475
Lynn, Mass.....	55,727	38,274
Memphis, Tenn.....	64,495	33,592
Milwaukee, Wis.....	204,468	115,587
Minneapolis, Minn.....	164,738	46,887
Nashville, Tenn.....	76,168	43,350
Newark, N. J.....	181,830	136,508
New Haven, Conn.....	81,298	62,882
New Orleans, La.....	242,039	216,090
New York, N. Y.....	1,515,301	1,206,299
Omaha, Neb.....	140,452	30,518
Paterson, N. J.....	78,347	51,031
Philadelphia, Pa.....	1,046,964	847,170
Pittsburgh, Pa.....	238,617	156,389
Providence, R. I.....	132,146	104,857
Reading, Pa.....	58,661	43,278
Richmond, Va.....	81,388	63,600
Rochester, N. Y.....	133,896	89,366
Saint Joseph, Mo.....	52,324	32,431
Saint Louis, Mo.....	451,770	350,518
Saint Paul, Minn.....	133,156	41,473
San Francisco, Cal.....	298,997	233,959
Scranton, Pa.....	75,215	45,850
Syracuse, N. Y.....	88,143	51,792
Toledo, O.....	81,434	50,137
Trenton, N. J.....	57,458	29,910
Troy, N. Y.....	60,956	56,747
Washington, D. C.....	230,392	177,624
Wilmington, Del.....	61,431	42,478
Worcester, Mass.....	84,655	58,291

RELATIVE RANK OF CITIES.

In 1870 there were but fourteen cities each containing more than 100,000 inhabitants. In 1880 this number had increased to twenty, and in 1890 to twenty-eight.

In 1880 there was but one city, New York, which had a population in excess of a million. In 1890 there were three, New York, Chicago, and Philadelphia.

The number and relative rank of cities having a population of 100,000 or more at the date of each of these censuses are set forth in the following table.

	RANK.		
	1890.	1880.	1870.
New York, N. Y.	1	1	1
Chicago, Ill.	2	4	5
Philadelphia, Pa.	3	2	2
Brooklyn, N. Y.	4	3	3
Saint Louis, Mo.	5	6	4
Boston, Mass.	6	5	7
Baltimore, Md.	7	7	6
San Francisco, Cal.	8	9	10
Cincinnati, O.	9	8	8
Cleveland, O.	10	11	..
Buffalo, N. Y.	11	13	11
New Orleans, La.	12	10	9
Pittsburgh, Pa.	13	12	..
Washington, D. C.	14	14	12
Detroit, Mich.	15	18	..
Milwaukee, Wis.	16	19	..
Newark, N. J.	17	15	13
Minneapolis, Minn.	18	..	..
Jersey City, N. J.	19	17	..
Louisville, Ky.	20	16	14
Omaha, Neb.	21	..	..
Rochester, N. Y.	22	..	..
Saint Paul, Minn.	23	..	..
Kansas City, Mo.	24	..	..
Providence, R. I.	25	20	..
Denver, Col.	26	..	..
Indianapolis, Ind.	27	..	..
Allegheny City, Pa.	28	..	..

VALUES IN UNITED STATES MONEY

OF THE

PURE GOLD OR SILVER

REPRESENTING RESPECTIVELY THE MONETARY UNITS AND STANDARD COINS OF FOREIGN COUNTRIES.

The first section of the Act of March 3, 1873, provides "that the value of Foreign Coin, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the values of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the first day of January by the Secretary of the Treasury."

The estimates of values contained in the following table are those made by the Director of the Mint, January 1st, 1890, in compliance with the above stated provisions of law.

COUNTRY.	MONETARY UNIT.	STANDARD.	VALUE.		
			D.	C.	M.
Argentine Repub.	Peso	Gold & silv.	0	96	5
Austria	Florin	Silver	0	34	3
Belgium	Franc	Gold & silv.	0	19	3
Bolivia	Boliviano	Silver	0	69	8
Brazil	Milreis of 1000 reis.	Gold	0	54	6
British America	Dollar	Gold	1	00	0
Cent'l Am. States	Peso	Silver	0	69	8
Chili	Peso	Gold & silv.	0	91	2
China	Tael.. { Shanghai.. Haikwan.. (Customs).	Silver	1	3	1
			1	14	8
Cuba	Peso	Gold & silv.	0	92	6
Denmark	Crown	Gold	0	26	8
Ecuador	Sucre	Silver	0	69	8
Egypt	Pound (100 piastres)	Gold	4	94	3
France	Franc	Gold & silv.	0	19	3
German Empire	Mark	Gold	0	23	8
Great Britain...	Pound sterling....	Gold	4	86	6½
Greece	Drachma	Gold & silv.	0	19	3
Hayti	Gourde	Gold & silv.	0	96	5
India	Rupee of 16 annas.	Silver	0	33	2
Italy	Lira	Gold & silv.	0	19	3
Japan	Yen	Gold	0	99	7
Japan	Yen	Silver	0	75	2
Liberia	Dollar	Gold	1	00	0
Mexico	Dollar	Silver	0	75	8
Netherlands	Florin	Gold & silv.	0	40	2
Norway	Crown	Gold	0	26	8
Peru	Sol	Silver	0	69	8
Portugal ..	Milreis of 1000 reis.	Gold	1	8	0
Russia	Roubl. of 100 cop'ks	Silver	0	55	8
Spain	Peseta of 100 centim.	Gold & silv.	0	19	3
Sweden	Crown	Gold	0	26	8
Switzerland	Franc	Gold & silv.	0	19	3
Tripoli	Mahbub of 20 piast's	Silver	0	62	9
Turkey	Piastre	Gold	0	4	4
U. S. of Colombia	Peso	Silver	0	69	8
Venezuela	Bolivar	Silver	0	14	0

LEGAL HOLIDAYS.

NOTE.—Sunday, July 4 and December 25 are legal holidays in all the States. Other holidays in the different States are noted below:

In most of the States when the holiday falls on Sunday the Monday following is the holiday. Notes must be paid on the Saturday preceding.

- ALABAMA—Jan. 1, Feb. 22.
ARIZONA—Jan. 1, Feb. 22, May 30, any day of thanksgiving or general territorial election, or special election called by the Governor.
CALIFORNIA—Jan. 1, Feb. 22, May 30, Sept. 9, Thanksgiving, a State or general election.
COLORADO—Jan. 1, Feb. 22, May 30, Thanksgiving.
CONNECTICUT—Jan. 1, Feb. 22, May 30, Sept. 1, Thanksgiving, Fast day.
DELAWARE—Jan. 1, Feb. 22, Thanksgiving.
FLORIDA—Jan. 1, Feb. 22, any general election day, Thanksgiving.
GEORGIA—Jan. 1, Feb. 22, April 26, any Thanksgiving.
IDAHO—Same as Arizona.
ILLINOIS—Jan. 1, Feb. 22, May 30, Election Day, Thanksgiving.
INDIANA—Jan. 1, public fast, Thanksgiving.
IOWA—Jan. 1, May 30, Thanksgiving.
KANSAS—Jan. 1, May 30, public fast, Thanksgiving.
KENTUCKY—Jan. 1, Feb. 22, public fast, Thanksgiving.
LOUISIANA—Jan. 1 and 8, Feb. 22, Mardi Gras, March 4 in New Orleans, and Good Friday.
MAINE—Jan. 1, Feb. 22, May 30, public fast, Thanksgiving.
MARYLAND—Jan. 1, Good Friday, Feb. 22, Thanksgiving, or general and Congressional election days.
MASSACHUSETTS—Feb. 22, Fast day, May 30, first Monday in Sept., Thanksgiving.
MICHIGAN—Jan. 1, Feb. 22, May 30, and any day appointed by the Governor or President for fasting and thanksgiving.
MINNESOTA—Jan. 1, Feb. 22, Good Friday, Thanksgiving.
MISSISSIPPI—Jan. 1.
MISSOURI—Jan. 1, Feb. 22, any general or State election day, any Thanksgiving day.
MONTANA—Jan. 1, Feb. 22, May 30, public fast, and Thanksgiving.
NEBRASKA—Jan. 1, Feb. 22, April 22, May 30, Sept. 1, public fast and Thanksgiving.
NEVADA—Jan. 1, Feb. 22, and Thanksgiving day.
NEW HAMPSHIRE—Feb. 22, Fast day, May 30, Thanksgiving, or any day on which a general election is held for members of the Legislature.

LEGAL HOLIDAYS.—CONTINUED.

- NEW JERSEY—Jan. 1, Feb. 22, May 30, Sept. 1, Thanksgiving day, and any general election day for members of the Assembly. When these fall on Monday notes and drafts are payable on Tuesday; and when they fall on Sunday the Monday following is a legal holiday, and bills become due the Tuesday following.
NEW MEXICO—Jan. 1 and all days for fasting or thanksgiving. Notes due on holidays are payable on the next business day thereafter.
NEW YORK—Jan. 1, Feb. 22, May 30, the first Monday of Sept. (Labor day), any general election day, every Saturday from noon until midnight, which is designated a half holiday, and any day appointed or recommended by the Governor or President as a day of thanksgiving, or fasting and prayer, or other religious observance.
NORTH CAROLINA—Jan. 1, Feb. 22, May 10, May 20, Thanksgiving. When legal holidays are on Sunday the Monday following is a holiday, and notes due on that day are payable on Tuesday. But when the holiday is on Saturday, notes due on Sunday following are payable on Monday.
NORTH DAKOTA—Jan. 1, Feb. 22, May 30, Thanksgiving, public fast, and general State or National election.
OHIO—Jan. 1, Feb. 22, May 30, Thanksgiving.
OREGON—Jan. 1, Feb. 22, May 30, first Saturday in June, public fast, Thanksgiving, and every general election day.
PENNSYLVANIA—Jan. 1, Feb. 22, Good Friday, Sept. 1, Thanksgiving, Decoration Day. But if the latter falls on Sunday the Saturday preceding is to be observed as the holiday; and notes falling due on that day or the Sunday must be paid on Friday, or protested on that day.
RHODE ISLAND—Feb. 22, May 30, Thanksgiving.
SOUTH CAROLINA—Jan. 1, Feb. 22, National Thanksgiving, general election days.
SOUTH DAKOTA—See North Dakota.
TENNESSEE—Jan. 1, Thanksgiving.
TEXAS—Jan. 1, Feb. 22, March 2, April 21, and all days appointed by the President or the Governor as days of fasting or thanksgiving, and every State election day.
UTAH—Jan. 1, Feb. 22, May 30, July 24, and Thanksgiving and Fast days.
VERMONT—Jan. 1, May 30, Thanksgiving.
VIRGINIA—Jan. 1, Feb. 22, Fast day, Thanksgiving.
WASHINGTON—Jan. 1, Feb. 22, Decoration Day, Thanksgiving, days of general and special election for State and National officers.
WEST VIRGINIA—Jan. 1, Feb. 22, or a day of National thanksgiving.
WISCONSIN—Jan. 1, Feb. 22, May 30, June 10, Thanksgiving, general election day.
WYOMING—Jan. 1, Feb. 22, May 30, Thanksgiving.

INTEREST LAWS OF ALL THE STATES.

STATES AND TERRITORIES.	PENALTY OF USURY.	Legal.	
		Special.	
Alabama	Loss of interest	8	.....
Arizona	No Penalty	10	No limit.
Arkansas	Forfeiture of principal & interest.	6	10 per ct.
California	No penalty	7	No limit.
Colorado	No penalty	10	No limit.
Connecticut....	No penalty	6	6 per ct.
Dakota	Forfeiture of contract	7	12 per ct.
Delaware.....	Forfeiture of contract	6	6 per ct.
District of Col..	Forfeiture of all interest.....	6	10 per ct.
Florida	No penalty	8	No limit.
Georgia	Forfeiture of excess	7	8 per ct.
Idaho.....	Forf'ture of 3 times excess of int.	10	18 per ct.
Illinois	Forfeiture of all interest.....	6	8 per ct.
Indiana	Forfeiture of int. over 6 per cent.	6	8 per ct.
Iowa.....	Forfeiture of interest and costs .	6	10 per ct.
Kansas	Forfeiture of excess over 12per ct.	7	12 per ct.
Kentucky	Forfeiture of excess	6	6 per ct.
Louisiana	Forfeiture of interest	5	8 per ct.
Maine	No penalty	6	No limit.
Maryland	Forfeiture of excess	6	6 per ct.
Massachusetts .	No penalty—6 per ct. on judg'ts.	6	No limit.
Michigan	Forfeiture of excess	7	10 per ct.
Minnesota.....	Forfeiture of contract.	7	10 per ct.
Mississippi	Forfeiture of all interest.....	6	10 per ct.
Missouri	Forfeiture of all interest	6	10 per ct.
Montana	No penalty	10	No limit.
Nebraska.....	Forfeiture of all interest & costs.	7	10 per ct.
Nevada.....	No penalty	10	No limit.
New Hampshire	Forfeiture of 3 times excess of int.	6	6 per ct.
New Jersey	Forfeiture of all interest.....	6	6 per ct.
New Mexico ...	No penalty	6	12 per ct.
New York.....	Forfeiture of contract.*	6	6 per ct.
North Carolina.	Forfeiture of double am't of int.	6	8 per ct.
Ohio.....	Forfeiture of excess.	6	8 per et.
Oregon	Forfeiture of prin., int. & costs..	8	10 per ct.
Pennsylvania ..	Forfeiture of excess, Act of 1858.	6	6 per ct.
Rhode Island ..	Forfeiture, unless by contract.†.	6	No limit.
South Carolina.	Forfeiture of interest	7	10 per ct.
Tennessee.....	Forfeiture of over 6 per cent.....	6	6 per ct.
Texas	Forfeiture of interest.....	8	12 per et.
Utah	No penalty	10	No limit.
Vermont	Forfeiture of excess	6	7 per ct.
Virginia.....	Forfeiture of excess	6	6 per ct.
Washington....	No penalty	10	No limit.
West Virginia..	Forfeiture of excess	6	6 per ct.
Wisconsin.....	Forfeiture of all interest	7	10 per ct.
Wyoming	No penalty	12	No limit.

* Also punishable as a misdemeanor. Banks forfeit interest only, or double the interest if charged in advance.
 † Also 6 per cent. on judgments.

PRESIDENTS OF THE UNITED STATES.

No.	NAMES.	Born.	Inaugurated.	Term of Office.	Died.	Native of	Residence when elected.	Political Party.
1	GEORGE WASHINGTON	Feb. 22, 1732	April 30, 1789	8 years.....	Dec. 14, 1799	Virginia.	Virginia.	Federal.
2	JOHN ADAMS.....	Oct. 31, 1735	Mar. 4, 1797	" " " " " "	July 4, 1826	Mass.	Mass.	"
3	THOMAS JEFFERSON...	April 2, 1743	" " " " " "	" " " " " "	" " " " " "	Virginia.	Virginia.	Republican.
4	JAMES MADISON.....	Mar. 16, 1751	" " " " " "	" " " " " "	June 28, 1836	"	"	"
5	JAMES MONROE.....	April 28, 1758	" " " " " "	" " " " " "	July 4, 1831	Mass.	Mass.	Coalition.
6	JOHN QUINCY ADAMS.	July 11, 1767	" " " " " "	" " " " " "	Feb. 23, 1848	S. Carolina.	Tennessee.	Democrat.
7	ANDREW JACKSON ...	Mar. 15, 1767	" " " " " "	" " " " " "	June 8, 1845	New York.	New York.	"
8	MARTIN VAN BUREN.	Dec. 5, 1782	" " " " " "	" " " " " "	July 24, 1862	Virginia.	Ohio.	Whig.
9	WM. H. HARRISON ...	Feb. 9, 1773	" " " " " "	" " " " " "	April 4, 1841	"	Virginia.	"
10	JOHN TYLER.....	Mar. 29, 1790	April 6, 1841	1 month.....	Jan. 18, 1862	"	Virginia.	Democrat.
11	JAMES K. POLK.....	Nov. 2, 1795	Mar. 4, 1845	3 yrs. 11 mos.	June 15, 1849	N. Carolina.	Tennessee.	Whig.
12	ZACHARY TAYLOR....	Sept. 24, 1784	" " " " " "	1 year 4 mos..	July 9, 1850	Virginia.	Louisiana.	"
13	MILLARD FILLMORE ..	Feb. 7, 1800	July 9, 1850	2 years 8 mos.	Mar. 7, 1874	New York.	New York.	Democrat.
14	FRANKLIN PIERCE....	Nov. 23, 1804	Mar. 4, 1853	4 years.....	Oct. 8, 1869	N. Hamp.	N. Hamp.	"
15	JAMES BUCHANAN....	April 23, 1791	" " " " " "	" " " " " "	June 1, 1868	Penn.	Penn.	Democrat.
16	ABRAHAM LINCOLN...	Feb. 12, 1809	" " " " " "	" " " " " "	April 15, 1865	Kentucky.	Illinois.	Republican.
17	ANDREW JOHNSON....	Dec. 29, 1808	April 15, 1865	4 yrs. 40 days.	July 31, 1875	N. Carolina.	Tennessee.	"
18	ULYSSES S. GRANT...	April 27, 1822	Mar. 4, 1869	3 yrs. 10½ mos.	July 23, 1885	Ohio.	Illinois.	"
19	RUTHERF'D B. HAYES	Oct. 4, 1822	" " " " " "	" " " " " "	" " " " " "	"	Ohio.	"
20	JAMES A. GARFIELD..	Nov. 19, 1831	" " " " " "	" " " " " "	" " " " " "	"	"	"
21	CHESTER A. ARTHUR.	Oct. 5, 1830	Sept. 20, 1881	6½ months....	Sept. 19, 1881	Vermont.	New York.	Democrat.
22	GROVER CLEVELAND..	Mar. 18, 1837	Mar. 4, 1885	3 yrs. 5½ mos.	Nov. 18, 1886	New Jersey.	"	"
23	BENJAMIN HARRISON.	Aug. 20, 1833	" " " " " "	4 years.....	" " " " " "	Ohio.	Indiana.	Republican.

STANDARD TIME.

In this Almanac the risings and settings of the Sun and Moon are given in local mean time, as heretofore. The Tides are given in STANDARD TIME.

To change to STANDARD TIME add or subtract the minutes as given below, according as they are marked *plus* or *minus*.

Standard Time Divisions as adopted by the Railroads.

EASTERN STANDARD—75th Meridian. Canada, between Quebec and Detroit,—U. S. east of Buffalo, N. Y.; Pittsburg, Pa.; Wheeling and Huntington, W. Va.; Bristol, Tenn.; Charlotte, N. C., and Augusta, Ga.

CENTRAL STANDARD—90th Meridian. West from "Eastern" limits, as above, to Broadview, Canada; to the Missouri River in Dakota; North Platte and McCook, Nebraska; Wallace and Dodge City, Kansas; Toyah and Sanderson, Texas.

MOUNTAIN STANDARD—105th Meridian. West from "Central" limits to Heron, Montana; Ogden, Utah; Needles and Yuma, Arizona.

PACIFIC STANDARD—120th Meridian. West from "Mountain" limits to coast.

Correction for the following Cities.

Eastern Standard. 75° Longitude.	Central Standard. 90° Longitude.
Minutes.	Minutes.
Bangor, Me. — 25	Cleveland, Ohio — 33
Augusta, Me. — 21	Columbus, Ohio — 28
Portland, Me. — 19	Detroit, Mich. — 28
Boston, Mass. — 16	Toledo, Ohio. — 26
Newport, R. I. — 15	Dayton, Ohio — 23
Providence, R. I. — 14	Cincinnati, Ohio. — 22
Concord, N. H. — 14	Louisville, Ky. — 18
New London, Conn. — 11	Indianapolis, Ind. — 16
Springfield, Mass. ... — 10	Chicago, Ill. — 10
Montpelier, Vt. — 10	Milwaukee, Wis. — 8
Hartford, Conn. — 9	Springfield, Ill. — 2
Montreal, Que. — 6	Memphis, Tenn. 0
Albany, N. Y. — 5	New Orleans, La. ... 0
New York, N. Y. ... — 4	St. Louis, Mo. + 1
Utica, N. Y. + 1	Rock Island, Ill. + 3
Philadelphia, Pa. + 1	Dubuque, Iowa + 3
Syracuse, N. Y. + 5	Burlington, Iowa + 5
Baltimore, Md. + 6	St. Paul, Minn. + 12
Washington, D. C. ... + 8	Des Moines, Iowa. ... + 14
Rochester, N. Y. + 11	Kansas City, Mo. + 18
Buffalo, N. Y. + 16	Galveston, Texas + 19
Pittsburg, Pa. + 20	Omaha, Neb. + 24
Mountain Standard. 105° Longitude.	Pacific Standard. 120° Longitude.
Denver, Col. 0	Sacramento, Cal. + 6
Salt Lake City, Utah, + 28	San Francisco, Cal. ... + 10

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JANUARY,		FEBRUARY,		MARCH.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	10 11	7 8	11 45	8 41	10 40	7 35
2	11 9	8 3	0 7	9 27	11 20	8 14
3	.....	9 0	0 49	10 7	11 58	8 56
4	0 28	9 51	1 29	10 43	0 15	9 32
5	1 17	10 36	2 7	11 20	0 52	10 8
6	2 3	11 19	2 45	.....	1 28	10 41
7	2 45	.....	3 23	0 22	2 5	11 18
8	3 26	0 24	4 6	1 5	2 44	.....
9	4 9	1 8	4 55	1 54	3 27	0 26
10	4 55	1 54	5 50	2 48	4 17	1 16
11	5 43	2 41	6 50	3 48	5 15	2 14
12	6 34	3 31	7 52	4 48	6 18	3 16
13	7 27	4 24	8 51	5 48	7 24	4 20
14	8 22	5 18	9 46	6 44	8 24	5 20
15	9 16	6 13	10 37	7 31	9 19	6 17
16	10 8	7 5	11 21	8 15	10 10	7 6
17	10 58	7 52	.....	9 0	10 53	7 48
18	11 42	8 38	0 23	9 42	11 34	8 29
19	0 4	9 24	1 4	10 21	.....	9 13
20	0 48	10 6	1 45	11 1	0 36	9 55
21	1 30	10 46	2 28	11 48	1 20	10 39
22	2 13	11 28	3 16	0 14	2 9	11 30
23	2 54	.....	4 12	1 11	3 2	.....
24	3 40	0 39	5 19	2 17	4 3	1 2
25	4 32	1 31	6 31	3 29	5 14	2 12
26	5 32	2 30	7 45	4 42	6 27	3 25
27	6 40	3 37	8 52	5 49	7 36	4 32
28	7 50	4 46	9 49	6 47	8 36	5 34
29	8 59	5 57	.....	.....	9 27	6 25
30	10 2	7 0	.....	.....	10 11	7 8
31	10 58	7 52	.....	.....	10 49	7 44

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	APRIL.		MAY.		JUNE.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	11 25	8 19	11 27	8 21	0 2	9 23
2	11 59	8 57	.....	9 2	0 46	10 7
3	0 16	9 33	0 24	9 43	1 32	10 49
4	0 53	10 9	1 6	10 23	2 17	11 36
5	1 32	10 46	1 50	11 7	3 3	0 0
6	2 13	11 30	2 37	11 58	3 50	0 49
7	2 58	.....	3 26	0 24	4 41	1 39
8	3 49	0 48	4 19	1 18	5 34	2 32
9	4 46	1 45	5 16	2 15	6 29	3 27
10	5 48	2 46	6 15	3 13	7 27	4 23
11	6 52	3 49	7 11	4 8	8 25	5 21
12	7 51	4 48	8 5	5 2	9 23	6 21
13	8 45	5 42	8 58	5 55	10 22	7 18
14	9 34	6 33	9 49	6 47	11 20	8 15
15	10 21	7 17	10 40	7 35	.....	9 14
16	11 5	7 59	11 30	8 25	0 45	10 10
17	11 49	8 46	.....	9 23	1 40	11 0
18	0 12	9 36	0 53	10 18	2 31	11 52
19	1 2	10 25	1 51	11 15	3 19	0 17
20	1 58	11 22	2 48	.....	4 8	1 7
21	2 56	.....	3 45	0 44	4 56	1 54
22	3 59	0 58	4 43	1 42	5 46	2 44
23	5 7	2 5	5 40	2 38	6 35	3 32
24	6 11	3 9	6 34	3 31	7 26	4 22
25	7 12	4 9	7 24	4 21	8 15	5 12
26	8 6	5 3	8 10	5 7	9 3	6 1
27	8 53	5 50	8 55	5 52	9 51	6 49
28	9 35	6 33	9 37	6 35	10 40	7 35
29	10 14	7 11	10 19	7 16	11 24	8 18
30	10 51	7 45	11 1	7 54	.....	9 6
31	.....	.....	11 41	8 38	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JULY.		AUGUST.		SEPTEMBER.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	0 29	9 49	1 27	10 42	2 24	11 43
2	1 13	10 29	2 7	11 22	3 12	0 10
3	1 55	11 10	2 48	.....	4 9	1 9
4	2 36	11 54	3 32	0 31	5 19	2 17
5	3 18	0 16	4 26	1 24	6 35	3 33
6	4 4	1 3	5 27	2 25	7 50	4 47
7	4 56	1 54	6 39	3 36	8 55	5 53
8	5 52	2 50	7 53	4 50	9 52	6 50
9	6 54	3 52	9 4	6 2	10 40	7 35
10	8 2	4 59	10 7	7 4	11 20	8 14
11	9 9	6 8	11 1	7 55	11 58	8 55
12	10 14	7 10	11 46	8 43	0 16	9 33
13	11 13	8 8	0 8	9 27	0 53	10 8
14	.....	9 4	0 49	10 6	1 30	10 45
15	0 31	9 54	1 28	10 42	2 10	11 25
16	1 19	10 37	2 7	11 21	2 51	.....
17	2 3	11 19	2 46	.....	3 39	0 38
18	2 45	.....	3 27	0 25	4 33	1 32
19	3 26	0 24	4 13	1 12	5 33	2 31
20	4 10	1 9	5 7	2 5	6 36	3 33
21	4 57	1 55	6 5	3 3	7 38	4 35
22	5 47	2 45	7 8	4 5	8 35	5 32
23	6 42	3 39	8 8	5 5	9 25	6 23
24	7 38	4 35	9 4	6 2	10 10	7 7
25	8 35	5 32	9 55	6 53	10 52	7 46
26	9 29	6 27	10 42	7 37	11 31	8 26
27	10 19	7 16	11 22	8 16	.....	9 9
28	11 6	7 59	.....	8 58	0 32	9 52
29	11 47	8 44	0 19	9 37	1 17	10 37
30	0 8	9 27	0 59	10 16	2 7	11 29
31	0 48	10 6	1 40	10 55	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	OCTOBER.		NOVEMBER.		DECEMBER.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	3 3	.....	5 9	2 8	5 38	2 36
2	4 6	I 5	6 12	3 9	6 31	3 28
3	5 18	2 16	7 10	4 7	7 21	4 18
4	6 31	3 28	8 3	5 0	8 9	5 6
5	7 38	4 34	8 50	5 47	8 56	5 54
6	8 35	5 33	9 32	6 30	9 42	6 40
7	9 25	6 23	10 14	7 11	10 26	7 23
8	10 9	7 6	10 54	7 48	11 9	8 4
9	10 49	7 43	11 31	8 26	11 51	8 48
10	11 24	8 19	.....	9 10	0 13	9 34
11	.....	8 58	0 33	9 53	0 57	10 15
12	0 19	9 36	I 17	10 34	I 41	10 57
13	0 58	10 15	2 2	11 20	2 24	11 41
14	I 40	10 56	2 48	.....	3 6	0 4
15	2 25	11 44	3 37	0 36	4 0	0 49
16	3 12	0 10	4 27	I 26	4 37	I 36
17	4 4	I 3	5 21	2 19	5 28	2 26
18	5 2	2 0	6 15	3 13	6 21	3 19
19	6 2	3 0	7 9	4 6	7 20	4 17
20	7 0	3 57	8 1	4 58	8 21	5 17
21	7 55	4 51	8 54	5 51	9 22	6 20
22	8 45	5 43	9 46	6 44	10 24	7 21
23	9 33	6 31	10 40	7 35	11 23	8 17
24	10 18	7 15	11 32	8 27	.....	9 18
25	11 3	7 57	0 0	9 27	0 48	10 13
26	11 48	8 45	0 57	10 23	I 43	11 2
27	0 12	9 35	I 55	11 19	2 32	11 52
28	I 4	10 28	2 53	.....	3 18	0 17
29	2 I	11 25	3 47	0 46	4 6	I 5
30	3 0	.....	4 43	I 42	4 55	I 53
31	4 3	I 2	.....	.....	5 45	2 43

TIDE TABLE

(The following values are derived from late determinations of the UNITED STATES COAST SURVEY.)

To find the time (Standard Time) of High Water at any of the following places, add or subtract the hours and minutes opposite the name of place in the following Table, to or from the hours and minutes of High Water at NEW YORK for the required day, as found in the *Calendar Page*.

	EASTERN STANDARD.		Mean range. Feet.
	H.	M.	
Eastport, Me.	add	2 33	18.2
Bar Harbor, Me.	"	2 27	10.4
Portland, Me.	"	2 55	9.1
Portsmouth, N. H.	"	3 3	8.6
Isle of Shoals, N. H.	"	2 57	8.7
Newburyport, Mass.	"	3 16	7.5
Gloucester, Mass.	"	2 44	8.9
Salem, Mass.	"	2 54	9.2
Nahant, Mass.	"	2 50	9.4
Plymouth, Mass.	"	2 59	10.2
Provincetown, Mass.	"	3 0	9.2
Nantucket, Mass.	"	4 15	3.0
Vineyard Haven, Mass.	"	3 32	1.6
Wood's Hole, North Side, Mass.	sub.	0 21	4.0
Wood's Hole, South Side, Mass.	add	0 14	1.6
New Bedford Entrance (Dumpling Rock), Mass. }	sub.	0 20	3.7
Newport, R. I.	"	0 33	3.9
Point Judith, R. I.	"	0 45	3.1
Sandy Hook, N. J.	"	0 32	4.7
Watch Hill, R. I.	add	0 44	2.7
Stonnington, Conn.	"	0 52	2.7
New London, Conn.	"	I 14	2.6
New Haven, Conn.	"	2 57	6.0
Bridgeport, Conn.	"	3 I	6.5
Montauk Point, L. I.	"	0 4	1.9
Throg's Neck, N. Y.	"	3 12	7.3
Cape May Landing, N. J.	"	0 16	4.8
Newcastle, Del.	"	5 52	6.5
Philadelphia, Penn.	"	5 36	6.0
Annapolis, Md.	sub.	3 19	0.9
Blatimore, Md.	"	I 24	1.3
Richmond, Va.	"	3 25	3.6
Hatteras Inlet, N. C.	"	0 56	2.0
Beaufort, N. C.	"	0 35	2.8
Charleston (C. H. Wharf), S. C.	"	0 19	5.1
CENTRAL STANDARD.			
Fort Pulaski (Savannah Ent.), Ga.	"	I 21	6.9
Savannah (Dry Dock Wharf), Ga.	"	0 26	6.5
St. Augustine, Fla.	"	0 17	4.2
Key West, Fla.	add	0 26	1.2
Tampa Bay (Egmont Key), Fla.	"	2 49	1.4
Cedar Keys (Depot Key), Fla.	"	4 52	2.6

SHORT METHOD

FOR CALCULATING INTEREST.

Multiply the principal by as many hundreds as there are days, and

For 4 per cent.....	Divide by	90		
" 5 " "	" "	" "	" "	72
" 6 " "	" "	" "	" "	60
" 7 " "	" "	" "	" "	52
" 8 " "	" "	" "	" "	45
" 9 " "	" "	" "	" "	40
" 10 " "	" "	" "	" "	36
" 12 " "	" "	" "	" "	30

EXAMPLE — INTEREST on \$50 for 30 days at 4%.
 $50 \times .30 = 15.00$, which divided by 90 = $16\frac{2}{3}$ cents — the required result.

FESTIVALS AND FASTS.

Epiphany	Jan. 6
Septuagesima Sunday	Jan. 29
Quinquagesima — Shrove Sunday	Feb. 12
Ash Wednesday	Feb. 15
First Sunday in Lent	Feb. 19
St. Patrick	Mar. 17
Palm Sunday	Mar. 26
Good Friday	Mar. 31
Easter Sunday	April 2
Low Sunday	April 9
Rogation Sunday	May 7
Ascension Day — Holy Thursday	May 11
Pentecost — Whit Sunday	May 21
Trinity Sunday	May 28
Corpus Christi	June 1
St. John Baptist	June 24
Michælmass Day	Sept. 29
St. Andrew	Nov. 30
First Sunday in Advent	Dec. 3
Christmas Day	Dec. 25

THE SEASONS.

	Eastern Standard.		Central Standard.
Vernal Equinox,	Mar. 20, 4h. M.	Mar. 20,	3h. M.
Summer Solstice,	June 21, 0h. M.	June 20,	11h. A.
Autumnal Equinox,	Sept. 22, 2h. A.	Sept. 22,	1h. A.
Winter Solstice,	Dec. 21, 9h. M.	Dec. 21,	8h. M.
	Mountain Standard.		Pacific Standard.
Vernal Equinox,	Mar. 20, 2h. M.	Mar. 20,	1h. M.
Summer Solstice,	June 20, 10h. A.	June 20,	9h. A.
Autumnal Equinox,	Sept. 22, 0h. A.	Sept. 22,	11h. M.
Winter Solstice,	Dec. 21, 7h. M.	Dec. 21,	6h. M.

ECLIPSES FOR THE YEAR.

IN the year 1893 there will be two Eclipses, — both of the SUN.

I. A TOTAL ECLIPSE OF THE SUN, April 16. Invisible to North America. Visible to South America, the larger part of Africa, southern Europe, and intermediate Atlantic Ocean.

II. AN ANNULAR ECLIPSE OF THE SUN, October 9. Visible to the western halves of North and South America, (including the West Indies,) the extreme north-eastern tip of Asia, and eastern Pacific Ocean. Invisible east of a line drawn through Bismarck, (Dak.), Omaha, Memphis, and Sapelo Island, (Ga.) The path of the annulus being in the Pacific Ocean. Occurring, as a partial Eclipse, as follows: —

	Standard.	Begins.	Ends.	Digits Eclipsed.
		H. M.	H. M.	
Lawrence, Kan.....	Central	2 2 A.	2 41 A.	Small.
Galveston, Tex.....	"	1 56 A.	3 36 A.	2
San Antonio, Tex.....	"	1 38 A.	3 33 A.	3
Austin, Tex.....	"	1 40 A.	3 31 A.	3
New Orleans, La.....	"	2 27 A.	3 31 A.	1
Mobile, Ala.....	"	2 35 A.	3 25 A.	1
Pensacola, Fla.....	"	2 37 A.	3 25 A.	1
Bismarck, Dak.....	Mountain	0 55 A.	1 18 A.	Slight.
Denver, Col.....	"	0 13 A.	1 56 A.	2
Salt Lake City, Utah..	"	11 47 M.	1 51 A.	3
Santa Fe, N. Mex.....	"	0 7 A.	2 9 A.	3
Gallatin, Mont... ..	"	11 55 M.	1 35 A.	2
San Francisco, Cal. ...	Pacific	10 19 M.	0 55 A.	5
Portland, Ore.....	"	10 25 M.	0 37 A.	4
Victoria, V. C. I.....	"	10 26 M.	0 28 A.	3
Los Angeles, Cal.....	"	10 31 M.	1 8 A.	5
San Diego, Cal.....	"	10 33 M.	1 13 A.	6
Monterey, Cal.....	"	10 22 M.	0 59 A.	6
Virginia City, Nev.....	"	10 28 M.	0 54 A.	5

MORNING AND EVENING STARS.

MERCURY will be Evening Star about March 14, July 11, and November 5; and Morning Star about April 28, August 25, and December 14.

VENUS will be Morning Star till May 2; and Evening Star the rest of the year.

JUPITER will be Evening Star till April 27; then Morning Star till November 18; and Evening Star again the rest of the year.

CHRONOLOGICAL CYCLES.

Dominical Letter	A.
Epact	12
Lunar Cycle, or Golden Number	13
Solar Cycle	26
Roman Indiction	6
Julian Period	6606

The Calendars for the Latitude of Boston and Chicago

May be used for Central and Southern New England, Central New York, Southern Michigan, Southern Wisconsin, Northern Iowa, Northern Nebraska, South Dakota, and Wyoming.

The Calendars for the Latitude of New York and Philadelphia

May be used for Southern New York, New Jersey, Pennsylvania, Northern Ohio, Northern Indiana, Northern Illinois, Southern Iowa, and Southern Nebraska.

The Calendars for the Latitude of Washington, Cincinnati, etc.

May be used for Delaware, Maryland, the Virginias, Southern Ohio, Southern Indiana, Southern Illinois, Kentucky, Missouri, Kansas, and Colorado.

THE SIZE OF THE SEAS.

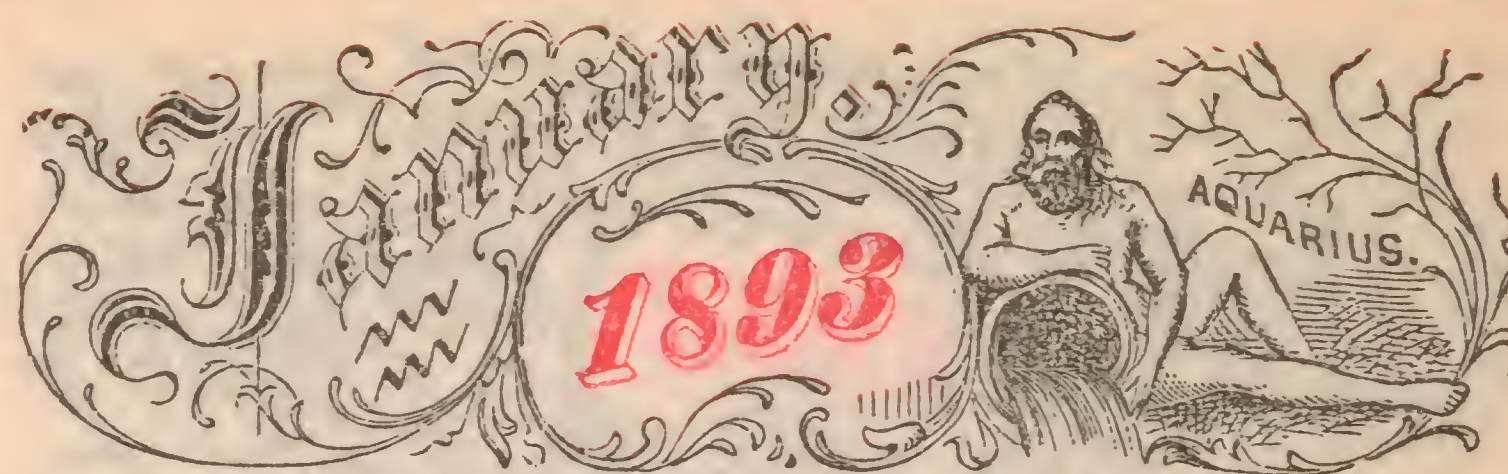
	Miles long.
Mediterranean.....	2,000
Caribbean.....	1,800
Red.....	1,400
Black.....	932
Baltic.....	600

AREA OF OCEANS IN SQ. MILES.

Pacific.....	80,000,000
Atlantic.....	40,000,000
Indian.....	20,000,000
Southern.....	10,000,000
Arctic.....	5,000,000

SIZE OF THE GREAT LAKES.

	Miles long.	Miles wide.
Superior.....	380	120
Michigan.....	330	60
Ontario.....	170	40
Champlain.....	123	12
Erie.....	270	50
Huron.....	250	90
Winnipeg.....	240	40
Athabaska.....	200	20



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON.....	2d. 8h. 41m. M.	2d. 7h. 41m. M.
LAST QUARTER...	9d. 5h. 28m. A.	9d. 4h. 28m. A.
NEW MOON.....	17d. 8h. 28m. A.	17d. 7h. 28m. A.
FIRST QUARTER..	25d. 1h. 27m. M.	25d. 0h. 27m. M.
FULL MOON.....	31d. 9h. 11m. A.	31d. 8h. 11m. A.

Day.	Day of W'k.	LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	S	r7 30	6 51	r7 25	6 44	r7 19	6 37
2	MO.	s4 40	rises.	s4 45	rises.	s4 50	rises.
3	TU.	r7 30	5 50	r7 25	5 56	r7 19	6 3
4	WE.	s4 42	7 5	s4 47	7 10	s4 52	7 16
5	TH.	r7 30	8 18	r7 25	8 21	r7 19	8 26
6	FR.	s4 44	9 27	s4 49	9 29	s4 54	9 32
7	SA.	r7 29	10 33	r7 25	10 34	r7 19	10 36
8	S	s4 46	11 36	s4 51	11 35	s4 56	11 36
9	MO.	r7 29	morn	r7 24	morn	r7 19	morn
10	TU.	s4 48	0 38	s4 53	0 36	s4 58	0 35
11	WE.	r7 28	1 40	r7 24	1 37	r7 18	1 35
12	TH.	s4 50	2 43	s4 55	2 39	s5 0	2 35
13	FR.	r7 28	3 47	r7 23	3 42	r7 18	3 36
14	SA.	s4 53	4 51	s4 57	4 45	s5 2	4 38
15	S	r7 27	5 52	r7 22	5 45	r7 17	5 38
16	MO.	s4 55	6 46	s5 0	6 39	s5 4	6 32
17	TU.	r7 26	sets.	r7 21	sets.	r7 16	sets.
18	WE.	s4 57	5 29	s5 2	5 34	s5 6	5 41
19	TH.	r7 24	6 41	r7 20	6 45	r7 15	6 50
20	FR.	s5 0	7 53	s5 4	7 56	s5 9	8 0
21	SA.	r7 23	9 4	r7 19	9 5	r7 14	9 8
22	S	s5 2	10 16	s5 7	10 16	s5 11	10 17
23	MO.	r7 22	11 28	r7 17	11 26	r7 13	11 26
24	TU.	s5 5	morn	s5 9	morn	s5 13	morn
25	WE.	r7 21	0 42	r7 16	0 39	r7 12	0 37
26	TH.	s5 7	1 59	s5 11	1 55	s5 15	1 51
27	FR.	r7 18	3 17	r7 14	3 11	r7 10	3 6
28	SA.	s5 10	4 32	s5 14	4 25	s5 18	4 19
29	S	r7 16	5 41	r7 13	5 34	r7 9	5 26
30	MO.	s5 13	6 39	s5 16	6 32	s5 20	6 25
31	TU.	r7 14	rises.	r7 11	rises.	r7 7	rises.



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 3h. 12m. A.	8d. 2h. 12m. M.
NEW MOON.....	16d. 11h. 16m. M.	16d. 10h. 16m. M.
FIRST QUARTER..	23d. 9h. 14m. M.	23d. 8h. 14m. M.

Day.	Day of W'k.	LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r7 13	5 55	r7 10	5 59	r7 6	6 4
2	TH.	s5 17	7 7	s5 20	7 10	s5 24	7 13
3	FR.	r7 11	8 15	r7 8	8 16	r7 4	8 19
4	SA.	s5 19	9 20	s5 22	9 20	s5 26	9 21
5	S	r7 9	10 24	r7 6	10 23	r7 2	10 22
6	MO.	s5 22	11 27	s5 25	11 24	s5 28	11 23
7	TU.	r7 7	morn	r7 3	morn	r7 0	morn
8	WE.	s5 24	0 30	s5 27	0 26	s5 30	0 23
9	TH.	r7 4	1 30	r7 1	1 28	r6 58	1 23
10	FR.	s5 27	2 37	s5 30	2 31	s5 33	2 25
11	SA.	r7 1	3 39	r6 59	3 32	r6 56	3 25
12	S	s5 30	4 37	s5 32	4 30	s5 35	4 22
13	MO.	r6 58	5 29	r6 56	5 22	r6 53	5 15
14	TU.	s5 32	6 12	s5 35	6 6	s5 38	6 0
15	WE.	r6 56	6 48	r6 53	6 43	r6 51	6 38
16	TH.	s5 35	sets.	s5 37	sets.	s5 39	sets.
17	FR.	r6 53	6 51	r6 51	6 53	r6 48	6 56
18	SA.	s5 37	8 3	s5 39	8 3	s5 42	8 5
19	S	r6 50	9 17	r6 48	9 16	r6 46	9 16
20	MO.	s5 40	10 32	s5 42	10 29	s5 44	10 28
21	TU.	r6 47	11 49	r6 45	11 45	r6 43	11 41
22	WE.	s5 42	morn	s5 44	morn	s5 46	morn
23	TH.	r6 44	1 7	r6 42	1 2	r6 40	0 56
24	FR.	s5 45	2 23	s5 47	2 17	s5 48	2 10
25	SA.	r6 41	3 32	r6 39	3 25	r6 38	3 17
26	S	s5 47	4 32	s5 49	4 25	s5 50	4 18
27	MO.	r6 38	5 21	r6 36	5 15	r6 35	5 8
28	TU.	s5 50	5 59	s5 51	5 54	s5 52	5 49
..
..
..



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON.....	2d. 11h. 3m. M.	2d. 10h. 3m. M.
LAST QUARTER..	10d. 0h. 13m. A.	10d. 11h. 13m. M.
NEW MOON.....	17d. 11h. 33m. A.	17d. 10h. 33m. A.
FIRST QUARTER.	24d. 4h. 33m. A.	24d. 3h. 33m. A.

Day.	Day of W'k.	LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r6 35	6 29	r6 33	6 25	r6 32	6 22
2	TH.	s5 52	rises.	s5 53	rises.	s5 54	rises.
3	FR.	r6 32	7 3	r6 30	7 4	r6 29	7 5
4	SA.	s5 54	8 9	s5 55	8 8	s5 57	8 8
5	S	r6 28	9 13	r6 27	9 11	r6 26	9 10
6	MO.	s5 57	10 16	s5 58	10 13	s5 59	10 10
7	TU.	r6 25	11 20	r6 24	11 16	r6 23	11 11
8	WE.	s5 59	morn	s6 0	morn	s6 1	morn
9	TH.	r6 21	0 25	r6 21	0 19	r6 20	0 14
10	FR.	s6 1	1 27	s6 2	1 21	s6 3	1 14
11	SA.	r6 18	2 26	r6 17	2 19	r6 17	2 11
12	S	s6 4	3 20	s6 4	3 13	s6 5	3 5
13	MO.	r6 15	4 6	r6 14	3 59	r6 14	3 53
14	TU.	s6 6	4 45	s6 6	4 39	s6 7	4 33
15	WE.	r6 11	5 17	r6 11	5 12	r6 11	5 8
16	TH.	s6 8	5 44	s6 9	5 41	s6 9	5 39
17	FR.	r6 8	sets.	r6 8	sets.	r6 8	sets.
18	SA.	s6 11	6 58	s6 11	6 58	s6 11	6 58
19	S	r6 4	8 15	r6 4	8 13	r6 5	8 12
20	MO.	s6 13	9 34	s6 13	9 30	s6 13	9 27
21	TU.	r6 1	10 54	r6 1	10 49	r6 2	10 44
22	WE.	s6 15	morn	s6 15	morn	s6 15	morn
23	TH.	r5 57	0 13	r5 58	0 7	r5 58	0 0
24	FR.	s6 17	1 26	s6 17	1 19	s6 16	1 12
25	SA.	r5 54	2 29	r5 54	2 22	r5 55	2 14
26	S	s6 20	3 20	s6 19	3 14	s6 18	3 7
27	MO.	r5 50	4 1	r5 51	3 56	r5 52	3 50
28	TU.	s6 22	4 33	s6 21	4 29	s6 20	4 25
29	WE.	r5 47	4 58	r5 48	4 55	r5 49	4 53
30	TH.	s6 24	5 19	s6 23	5 17	s6 22	5 17
31	FR.	r5 43	5 38	r5 44	5 38	r5 46	5 38



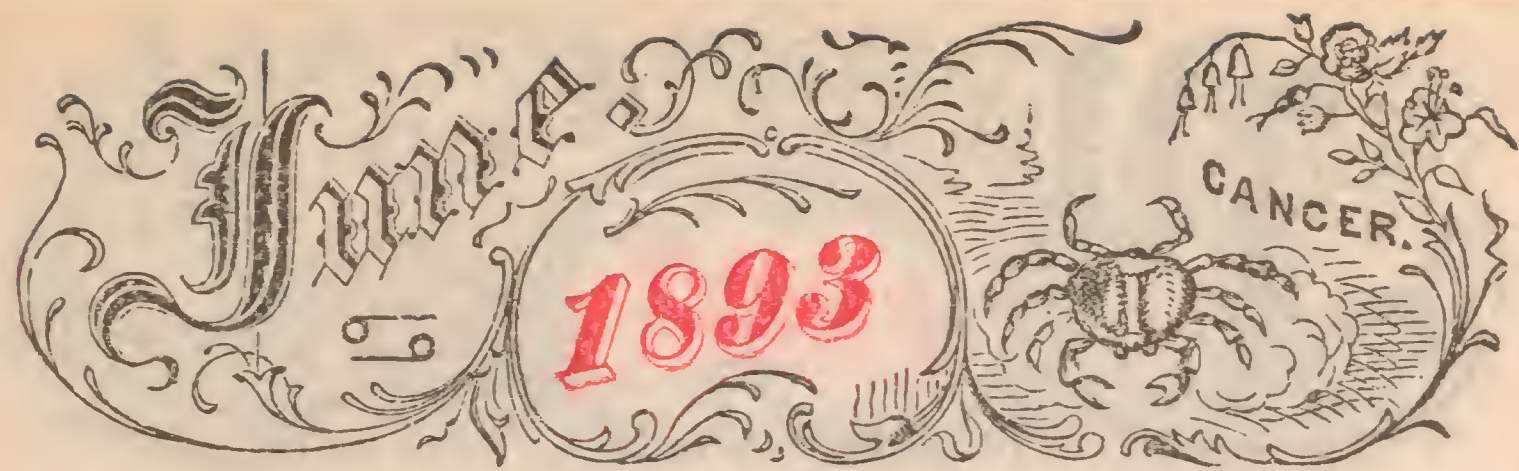
MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON	1d. 2h. 18m. M.	1d. 1h. 18m. M.
LAST QUARTER...	9d. 6h. 35m. M.	9d. 5h. 35m. M.
NEW MOON	16d. 9h. 34m. M.	16d. 8h. 34m. M.
FIRST QUARTER..	23d. 0h. 26m. M.	22d. 11h. 26m. A.
FULL MOON	30d. 6h. 23m. A.	30d. 5h. 23m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.		
1	SA.	r5 42	rises.	r5 43	rises.	r5 44	rises.	r5 44	rises.	r5 44	rises.
2	S	s6 28	8 4	s6 26	8 1	s6 25	7 59	s6 25	7 59	s6 25	7 59
3	MO.	r5 38	9 8	r5 39	9 4	r5 41	9 0	r5 41	9 0	r5 41	9 0
4	TU.	s6 30	10 12	s6 28	10 7	s6 27	10 1	s6 27	10 1	s6 27	10 1
5	WE.	r5 35	11 16	r5 36	11 10	r5 38	11 3	r5 38	11 3	r5 38	11 3
6	TH.	s6 32	morn	s6 30	morn	s6 29	morn	s6 29	morn	s6 29	morn
7	FR.	r5 31	0 17	r5 33	0 10	r5 35	0 3	r5 35	0 3	r5 35	0 3
8	SA.	s6 34	1 12	s6 33	1 5	s6 31	0 57	s6 31	0 57	s6 31	0 57
9	S	r5 28	2 0	r5 30	1 53	r5 32	1 46	r5 32	1 46	r5 32	1 46
10	MO.	s6 36	2 41	s6 35	2 35	s6 33	2 29	s6 33	2 29	s6 33	2 29
11	TU.	r5 25	3 15	r5 27	3 10	r5 29	3 5	r5 29	3 5	r5 29	3 5
12	WE.	s6 39	3 43	s6 37	3 39	s6 35	3 36	s6 35	3 36	s6 35	3 36
13	TH.	r5 21	4 8	r5 24	4 6	r5 26	4 4	r5 26	4 4	r5 26	4 4
14	FR.	s6 41	4 31	s6 39	4 30	s6 37	4 30	s6 37	4 30	s6 37	4 30
15	SA.	r5 18	4 54	r5 20	4 54	r5 23	4 56	r5 23	4 56	r5 23	4 56
16	S	s6 43	sets.	s6 41	sets.	s6 38	sets.	s6 38	sets.	s6 38	sets.
17	MO.	r5 15	8 29	r5 17	8 25	r5 20	8 20	r5 20	8 20	r5 20	8 20
18	TU.	s6 44	9 53	s6 43	9 47	s6 40	9 41	s6 40	9 41	s6 40	9 41
19	WE.	r5 12	11 12	r5 14	11 5	r5 17	10 58	r5 17	10 58	r5 17	10 58
20	TH.	s6 48	morn	s6 45	morn	s6 42	morn	s6 42	morn	s6 42	morn
21	FR.	r5 9	0 21	r5 11	0 14	r5 14	0 6	r5 14	0 6	r5 14	0 6
22	SA.	s6 50	1 18	s6 47	1 11	s6 44	1 4	s6 44	1 4	s6 44	1 4
23	S	r5 6	2 2	r5 9	1 56	r5 12	1 50	r5 12	1 50	r5 12	1 50
24	MO.	s6 52	2 35	s6 49	2 30	s6 46	2 26	s6 46	2 26	s6 46	2 26
25	TU.	r5 3	3 2	r5 6	2 59	r5 9	2 56	r5 9	2 56	r5 9	2 56
26	WE.	s6 54	3 25	s6 51	3 23	s6 48	3 22	s6 48	3 22	s6 48	3 22
27	TH.	r5 0	3 45	r5 3	3 44	r5 7	3 44	r5 7	3 44	r5 7	3 44
28	FR.	s6 56	4 3	s6 53	4 3	s6 50	4 5	s6 50	4 5	s6 50	4 5
29	SA.	r4 57	4 22	r5 0	4 24	r5 4	4 26	r5 4	4 26	r5 4	4 26
30	S	s6 59	4 42	s6 55	4 45	s6 52	4 49	s6 52	4 49	s6 52	4 49
...



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 9h. 24m. A.	8d. 8h. 24m. A.
NEW MOON	15d. 5h. 46m. A.	15d. 4h. 46m. A.
FIRST QUARTER..	22d. 9h. 52m. M.	22d. 8h. 52m. M.
FULL MOON	30d. 10h. 22m. M.	30d. 9h. 22m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.		
1	MO.	r4 54	rises.	r4 58	rises.	r5 2	rises.	r5 2	rises.	r5 2	rises.
2	TU.	s7 1	9 5	s6 57	8 59	s6 54	8 53	s6 54	8 53	s6 54	8 53
3	WE.	r4 52	10 7	r4 55	10 0	r4 59	9 53	r4 59	9 53	r4 59	9 53
4	TH.	s7 3	11 4	s7 0	10 57	s6 56	10 49	s6 56	10 49	s6 56	10 49
5	FR.	r4 49	11 55	r4 53	11 48	r4 57	11 40	r4 57	11 40	r4 57	11 40
6	SA.	s7 5	morn	s7 2	morn	s6 57	morn	s6 57	morn	s6 57	morn
7	S	r4 47	0 39	r4 51	0 33	r4 55	0 26	r4 55	0 26	r4 55	0 26
8	MO.	s7 8	1 16	s7 4	1 10	s6 59	1 5	s6 59	1 5	s6 59	1 5
9	TU.	r4 44	1 45	r4 48	1 41	r4 53	1 37	r4 53	1 37	r4 53	1 37
10	WE.	s7 10	2 10	s7 6	2 7	s7 1	2 5	s7 1	2 5	s7 1	2 5
11	TH.	r4 42	2 33	r4 46	2 31	r4 51	2 31	r4 51	2 31	r4 51	2 31
12	FR.	s7 12	2 55	s7 8	2 55	s7 3	2 55	s7 3	2 55	s7 3	2 55
13	SA.	r4 40	3 17	r4 44	3 18	r4 49	3 20	r4 49	3 20	r4 49	3 20
14	S	s7 14	3 42	s7 10	3 45	s7 5	3 48	s7 5	3 48	s7 5	3 48
15	MO.	r4 38	4 11	r4 42	4 15	r4 47	4 20	r4 47	4 20	r4 47	4 20
16	TU.	s7 16	sets.	s7 11	sets.	s7 7	sets.	s7 7	sets.	s7 7	sets.
17	WE.	r4 36	10 4	r4 40	9 57	r4 45	9 49	r4 45	9 49	r4 45	9 49
18	TH.	s7 18	11 8	s7 13	11 1	s7 8	10 53	s7 8	10 53	s7 8	10 53
19	FR.	r4 34	11 58	r4 39	11 52	r4 44	11 45	r4 44	11 45	r4 44	11 45
20	SA.	s7 20	morn	s7 15	morn	s7 10	morn	s7 10	morn	s7 10	morn
21	S	r4 32	0 37	r4 37	0 32	r4 42	0 27	r4 42	0 27	r4 42	0 27
22	MO.	s7 22	1 7	s7 17	1 3	s7 12	1 0	s7 12	1 0	s7 12	1 0
23	TU.	r4 31	1 31	r4 36	1 29	r4 41	1 27	r4 41	1 27	r4 41	1 27
24	WE.	s7 24	1 51	s7 19	1 50	s7 13	1 50	s7 13	1 50	s7 13	1 50
25	TH.	r4 29	2 10	r4 34	2 10	r4 39	2 11	r4 39	2 11	r4 39	2 11
26	FR.	s7 26	2 28	s7 20	2 29	s7 15	2 32	s7 15	2 32	s7 15	2 32
27	SA.	r4 28	2 48	r4 33	2 51	r4 38	2 54	r4 38	2 54	r4 38	2 54
28	S	s7 27	3 10	s7 22	3 14	s7 17	3 18	s7 17	3 18	s7 17	3 18
29	MO.	r4 27	3 34	r4 32	3 39	r4 37	3 45	r4 37	3 45	r4 37	3 45
30	TU.	s7 29	rises.	s7 23	rises.	s7 18	rises.	s7 18	rises.	s7 18	rises.
31	WE.	r4 26	8 59	r4 31	8 52	r4 36	8 44	r4 36	8 44	r4 36	8 44



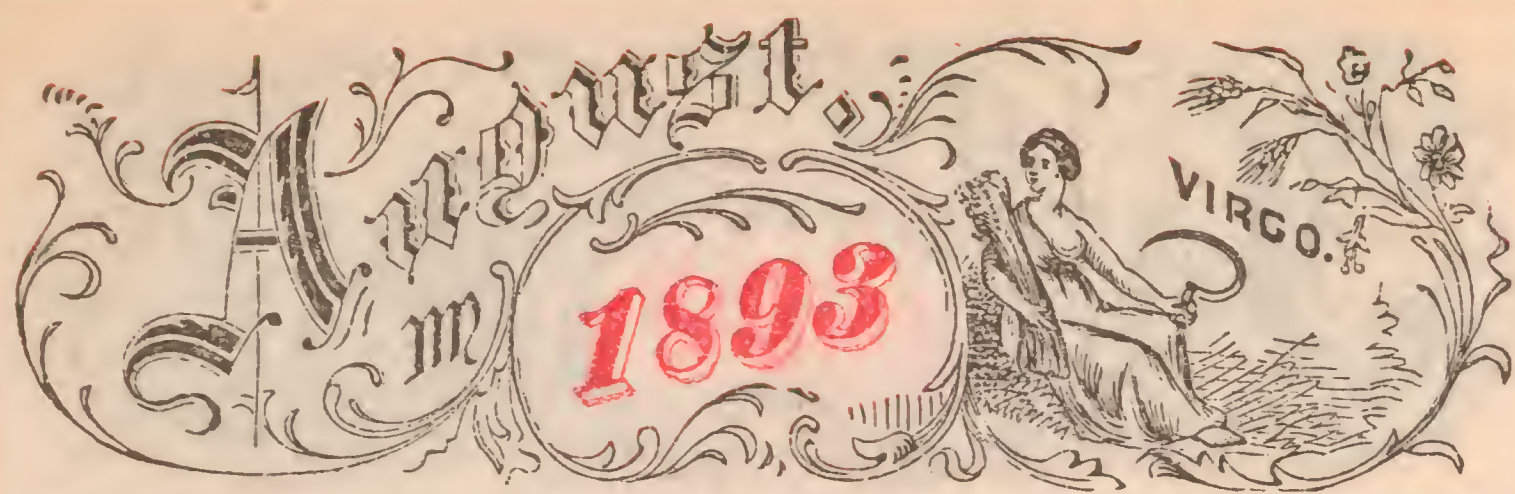
MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	7d. 8h. 43m. M.	7d. 7h. 43m. M.
NEW MOON.....	14d. oh. 51m. M.	13d. 11h. 51m. A.
FIRST QUARTER..	20d. 9h. 37m. A.	20d. 8h. 37m. A.
FULL MOON.....	29d. 1h. 25m. M.	29d. oh. 25m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	TH.	r4 25	9 52	r4 30	9 45	r4 36	9 37
2	FR.	s7 31	10 38	s7 26	10 31	s7 20	10 24
3	SA.	r4 24	11 15	r4 30	11 9	r4 35	11 3
4	S	s7 32	11 46	s7 27	11 41	s7 21	11 37
5	MO.	r4 24	morn	r4 29	morn	r4 35	morn
6	TU.	s7 34	0 13	s7 28	0 9	s7 23	0 7
7	WE.	r4 23	0 36	r4 29	0 34	r4 34	0 32
8	TH.	s7 35	0 57	s7 29	0 56	s7 24	0 56
9	FR.	r4 23	1 18	r4 28	1 19	r4 34	1 18
10	SA.	s7 36	1 40	s7 31	1 42	s7 25	1 45
11	S	r4 22	2 6	r4 28	2 9	r4 34	2 14
12	MO.	s7 37	2 39	s7 31	2 44	s7 26	2 50
13	TU.	r4 22	3 20	r4 28	3 26	r4 34	3 33
14	WE.	s7 38	sets.	s7 32	sets.	s7 27	sets.
15	TH.	r4 22	9 48	r4 28	9 41	r4 34	9 34
16	FR.	s7 39	10 32	s7 33	10 26	s7 27	10 21
17	SA.	r4 22	11 6	r4 28	11 2	r4 34	10 58
18	S	s7 39	11 33	s7 34	11 30	s7 28	11 28
19	MO.	r4 23	11 55	r4 28	11 53	r4 34	11 53
20	TU.	s7 40	morn	s7 34	morn	s7 28	morn
21	WE.	r4 23	0 15	r4 29	0 15	r4 34	0 15
22	TH.	s7 40	0 34	s7 34	0 35	s7 29	0 37
23	FR.	r4 24	0 53	r4 29	0 55	r4 35	0 58
24	SA.	s7 40	1 14	s7 35	1 17	s7 29	1 22
25	S	r4 24	1 38	r4 30	1 43	r4 36	1 48
26	MO.	s7 40	2 7	s7 35	2 13	s7 29	2 19
27	TU.	r4 25	2 41	r4 31	2 47	r4 37	2 55
28	WE.	s7 40	3 23	s7 35	3 30	s7 29	3 39
29	TH.	r4 26	rises.	r4 32	rises.	r4 37	rises.
30	FR.	s7 40	9 16	s7 35	9 10	s7 29	9 4
...



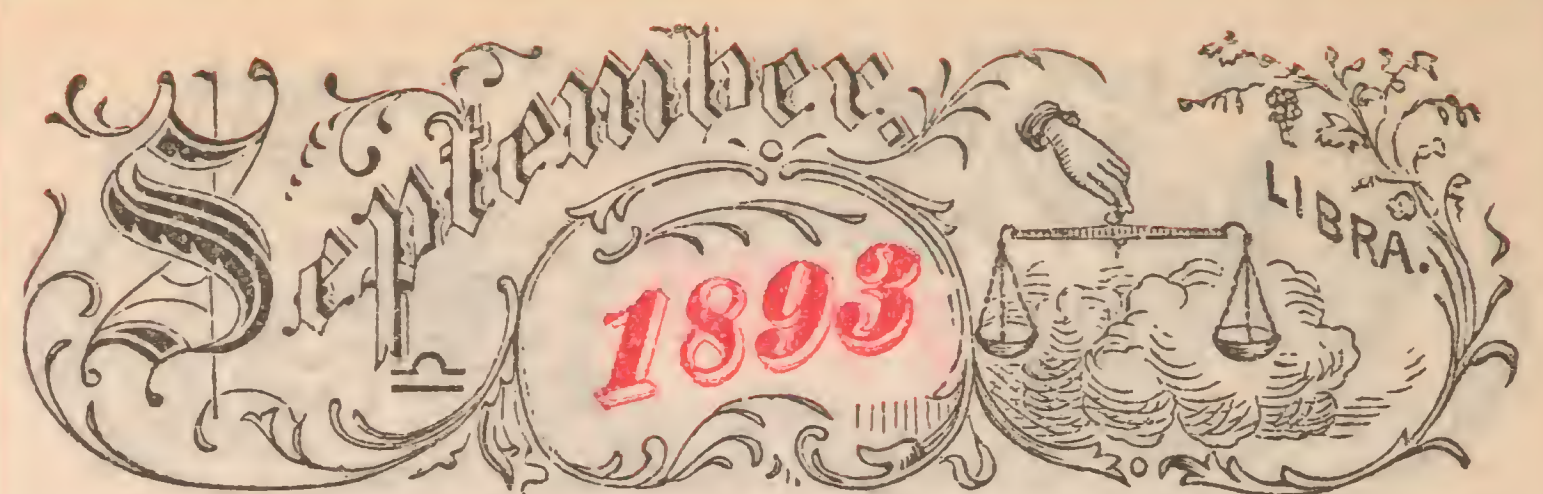
MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	6d. 5h. 5m. A.	6d. 4h. 5m. A.
NEW MOON.....	13d. 7h. 47m. M.	13d. 6h. 47m. M.
FIRST QUARTER..	20d. oh. 2m. A.	20d. 11h. 2m. M.
FULL MOON.....	28d. 3h. 10m. A.	28d. 2h. 10m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	SA.	r4 27	9 49	r4 32	9 44	r4 38	9 39
2	S	s7 40	10 16	s7 34	10 12	s7 29	10 9
3	MO.	r4 28	10 40	r4 33	10 37	r4 39	10 36
4	TU.	s7 39	11 1	s7 34	11 0	s7 28	10 59
5	WE.	r4 29	11 22	r4 35	11 22	r4 40	11 23
6	TH.	s7 39	11 43	s7 33	11 44	s7 28	11 47
7	FR.	r4 30	morn	r4 36	morn	r4 41	morn
8	SA.	s7 38	0 7	s7 33	0 10	s7 27	0 14
9	S	r4 32	0 35	r4 38	0 39	r4 43	0 45
10	MO.	s7 37	1 10	s7 32	1 16	s7 26	1 22
11	TU.	r4 33	1 57	r4 39	2 4	r4 44	2 12
12	WE.	s7 36	2 56	s7 31	3 3	s7 26	3 12
13	TH.	r4 35	sets.	r4 40	sets.	r4 45	sets.
14	FR.	s7 35	9 1	s7 30	8 56	s7 24	8 52
15	SA.	r4 37	9 32	r4 42	9 28	r4 47	9 26
16	S	s7 34	9 57	s7 29	9 55	s7 23	9 54
17	MO.	r4 38	10 18	r4 43	10 17	r4 48	10 17
18	TU.	s7 32	10 38	s7 28	10 38	s7 22	10 40
19	WE.	r4 40	10 57	r4 45	10 59	r4 50	11 2
20	TH.	s7 31	11 17	s7 26	11 20	s7 21	11 24
21	FR.	r4 42	11 40	r4 47	11 44	r4 52	11 49
22	SA.	s7 29	morn	s7 24	morn	s7 19	morn
23	S	r4 44	0 7	r4 48	0 12	r4 53	0 19
24	MO.	s7 27	0 39	s7 23	0 45	s7 18	0 53
25	TU.	r4 46	1 19	r4 50	1 26	r4 55	1 34
26	WE.	s7 25	2 7	s7 21	2 14	s7 16	2 23
27	TH.	r4 48	3 3	r4 52	3 10	r4 57	3 18
28	FR.	s7 23	rises.	s7 19	rises.	s7 14	rises.
29	SA.	r4 50	8 20	r4 54	8 16	r4 58	8 12
30	S	s7 21	8 45	s7 17	8 42	s7 12	8 40
31	MO.	r4 52	9 7	r4 56	9 5	r5 0	9 5



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	4d. 11h. 23m. A.	4d. 10h. 23m. A.
NEW MOON.....	11d. 3h. 48m. A.	11d. 2h. 48m. A.
FIRST QUARTER..	19d. 4h. 52m. M.	19d. 3h. 52m. M.
FULL MOON.....	27d. 3h. 43m. M.	27d. 2h. 43m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.		
1	TU.	r4 53	9 27	r4 57	9 27	r5 1	9 27				
2	WE.	s7 18	9 48	s7 14	9 49	s7 9	9 51				
3	TH.	r4 55	10 10	r4 59	10 12	r5 3	10 16				
4	FR.	s7 15	10 36	s7 12	10 40	s7 7	10 45				
5	SA.	r4 57	11 8	r5 1	11 13	r5 5	11 20				
6	S	s7 13	11 48	s7 9	11 54	s7 5	morn				
7	MO.	r4 59	morn	r5 2	morn	r5 6	0 2				
8	TU.	s7 10	0 41	s7 7	0 48	s7 3	0 57				
9	WE.	r5 1	1 47	r5 4	1 54	r5 8	2 3				
10	TH.	s7 7	3 1	s7 4	3 7	s7 0	3 15				
11	FR.	r5 3	sets.	r5 6	sets.	r5 10	sets.				
12	SA.	s7 4	7 57	s7 1	7 54	s6 58	7 52				
13	S	r5 5	8 20	r5 8	8 19	r5 12	8 18				
14	MO.	s7 2	8 40	s6 59	8 40	s6 55	8 41				
15	TU.	r5 7	8 59	r5 10	9 0	r5 14	9 3				
16	WE.	s6 59	9 19	s6 56	9 22	s6 53	9 25				
17	TH.	r5 10	9 41	r5 12	9 45	r5 15	9 50				
18	FR.	s6 56	10 6	s6 53	10 11	s6 50	10 17				
19	SA.	r5 12	10 37	r5 14	10 43	r5 17	10 50				
20	S	s6 53	11 14	s6 50	11 21	s6 47	11 29				
21	MO.	r5 14	11 59	r5 16	morn	r5 19	morn				
22	TU.	s6 50	morn	s6 47	0 6	s6 44	0 15				
23	WE.	r5 16	0 52	r5 18	0 59	r5 21	1 8				
24	TH.	s6 46	1 53	s6 44	1 59	s6 42	2 7				
25	FR.	r5 18	3 1	r5 20	3 6	r5 23	3 13				
26	SA.	s6 43	4 11	s6 41	4 15	s6 39	4 20				
27	S	r5 20	rises.	r5 22	rises.	r5 25	rises.				
28	MO.	s6 40	7 33	s6 38	7 32	s6 36	7 32				
29	TU.	r5 22	7 52	r5 24	7 53	r5 26	7 54				
30	WE.	s6 37	8 14	s6 35	8 16	s6 33	8 19				
31	TH.	r5 24	8 39	r5 26	8 42	r5 28	8 47				



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	3d. 4h. 41m. M.	3d. 3h. 41m. M.
NEW MOON.....	10d. 2h. 5m. M.	10d. 1h. 5m. M.
FIRST QUARTER..	17d. 11h. 19m. A.	17d. 10h. 19m. A.
FULL MOON.....	25d. 3h. 23m. A.	25d. 2h. 23m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.		
1	FR.	r5 25	9 9	r5 27	9 14	r5 29	9 20				
2	SA.	s6 31	9 47	s6 30	9 53	s6 28	10 0				
3	S	r5 27	10 34	r5 29	10 41	r5 31	10 49				
4	MO.	s6 28	11 33	s6 26	11 40	s6 25	11 49				
5	TU.	r5 30	morn	r5 31	morn	r5 33	morn				
6	WE.	s6 24	0 43	s6 23	0 50	s6 22	0 58				
7	TH.	r5 32	2 0	r5 33	2 6	r5 35	2 12				
8	FR.	s6 21	3 16	s6 20	3 21	s6 19	3 26				
9	SA.	r5 34	4 32	r5 35	4 35	r5 36	4 39				
10	S	s6 18	sets.	s6 16	sets.	s6 15	sets.				
11	MO.	r5 36	7 1	r5 37	7 2	r5 38	7 3				
12	TU.	s6 14	7 22	s6 13	7 24	s6 12	7 27				
13	WE.	r5 38	7 42	r5 39	7 45	r5 40	7 50				
14	TH.	s6 11	8 6	s6 10	8 11	s6 9	8 16				
15	FR.	r5 40	8 35	r5 41	8 41	r5 42	8 47				
16	SA.	s6 7	9 9	s6 7	9 15	s6 6	9 23				
17	S	r5 42	9 50	r5 43	9 57	r5 43	10 6				
18	MO.	s6 3	10 40	s6 3	10 47	s6 3	10 56				
19	TU.	r5 44	11 38	r5 45	11 45	r5 45	11 53				
20	WE.	s6 0	morn	s6 0	morn	s6 0	morn				
21	TH.	r5 47	0 43	r5 47	0 49	r5 47	0 56				
22	FR.	s5 56	1 52	s5 56	1 57	s5 57	2 3				
23	SA.	r5 49	3 2	r5 49	3 5	r5 49	3 10				
24	S	s5 53	4 12	s5 53	4 14	s5 53	4 17				
25	MO.	r5 51	rises.	r5 51	rises.	r5 51	rises.				
26	TU.	s5 49	6 19	s5 50	6 21	s5 50	6 23				
27	WE.	r5 53	6 43	r5 53	6 46	r5 52	6 50				
28	TH.	s5 46	7 10	s5 46	7 14	s5 47	7 20				
29	FR.	r5 55	7 45	r5 55	7 51	r5 54	7 58				
30	SA.	s5 43	8 30	s5 43	8 37	s5 43	8 45				
...				



MOON'S PHASES.
(In Standard Time.)

EAST'N DIVISION.

CENT. DIVISION.

NEW MOON.....	8d. 2h. 40m. M.	8d. 1h. 40m. M.
FIRST QUARTER..	16d. 5h. 21m. M.	16d. 4h. 21m. M.
FULL MOON.....	22d. 11h. 36m. A.	22d. 10h. 36m. A.
LAST QUARTER...	29d. 6h. 18m. A.	29d. 5h. 18m. A.

Day.	Day of W'k.	LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	FR.	r7 10	0 20	r7 5	0 21	r7 0	0 24
2	SA.	s4 28	1 27	s4 33	1 27	s4 38	1 28
3	S	r7 12	2 32	r7 7	2 31	r7 2	2 30
4	MO.	s4 28	3 37	s4 33	3 34	s4 38	3 33
5	TU.	r7 14	4 42	r7 9	4 38	r7 4	4 35
6	WE.	s4 28	5 47	s4 33	5 42	s4 38	5 37
7	TH.	r7 16	6 51	r7 11	6 45	r7 6	6 39
8	FR.	s4 28	sets.	s4 33	sets.	s4 38	sets.
9	SA.	r7 18	5 11	r7 13	5 18	r7 8	5 27
10	S	s4 28	6 7	s4 33	6 14	s4 38	6 22
11	MO.	r7 20	7 9	r7 15	7 15	r7 9	7 22
12	TU.	s4 28	8 15	s4 33	8 20	s4 39	8 26
13	WE.	r7 21	9 21	r7 16	9 25	r7 11	9 30
14	TH.	s4 29	10 27	s4 34	10 29	s4 39	10 33
15	FR.	r7 23	11 33	r7 18	11 34	r7 12	11 36
16	SA.	s4 29	morn	s4 34	morn	s4 40	morn
17	S	r7 24	0 40	r7 19	0 40	r7 14	0 41
18	MO.	s4 30	1 50	s4 35	1 48	s4 41	1 48
19	TU.	r7 26	3 5	r7 20	3 2	r7 15	3 0
20	WE.	s4 31	4 25	s4 36	4 20	s4 42	4 16
21	TH.	r7 26	5 47	r7 21	5 41	r7 15	5 35
22	FR.	s4 32	7 8	s4 37	7 1	s4 43	6 54
23	SA.	r7 27	rises.	r7 22	rises.	r7 16	rises.
24	S	s4 33	6 11	s4 38	6 17	s4 44	6 24
25	MO.	r7 28	7 32	r7 23	7 37	r7 17	7 43
26	TU.	s4 34	8 52	s4 40	8 55	s4 45	9 0
27	WE.	r7 29	10 6	r7 23	10 8	r7 18	10 11
28	TH.	s4 36	11 16	s4 41	11 16	s4 46	11 18
29	FR.	r7 29	morn	r7 24	morn	r7 19	morn
30	SA.	s4 37	0 24	s4 42	0 23	s4 48	0 23
31	S	r7 30	1 30	r7 24	1 28	r7 19	1 26

Ther.

TUES. FEB. 28, 1893
TUES. JAN. 3, 1893

Wea.
Wea.

Birds observed between
Mann's Choice and
New Paris.

June 2 '93

- Chimney Swift C
- Barn Swallow C
- Phoebe 4
- Bluebird C
- Am Goldfinch 2
- Meadow Lark 3
- Robin C
- Yellow Warblers 3
- Crow Blackbirds C
- Kingbird 3
- Redwing Blackbird 6
- Chipping sp. C
- Grass Vetch C
- Yellow-winged Sparrow 3
- House Wren 2
- Crow C
- Woodpecker 2
- Indigo-bird 1
- Flicker 1
- Red-headed Woodpecker 1
- Red-eyed Vireo C

- ✓ Kingfisher 1
- Baltimore Oriole 2
- Mourning Dove 2
- Night Hawk 6

The country between
 Mann's Choice and
 New Paris is very
 hilly and quite
 heavily wooded with
 oaks and chestnuts
 with a very few pitch
 and white pines.
 When within 3 or 4
 miles of New Paris
 the reason for calling
 the elevation Chestnut
 Ridge becomes very
 apparent, the woods
 being composed almost
 wholly of these trees.
 New Paris is in the
 valley between Chestnut
 Ridge and the main
 Ridge of the Alleghany
 which is said to

be about 7 miles
 distant. Two or three
 chipmunks were
 seen on the way
 over.

Mammals

- New Paris
- Chipmunk
- Red squirrel
- Gray "
- Arvicola reparans

(Opposums are said
 to be found occa-
 sionally

- Some of the notable trees
- Sugar maple
- 1 Chestnut Oak
- White oak
- Basswood

June 3, 1893

Explored a portion of the country west of New Paris towards the mountains. It consists mostly of hills which are covered with quite a heavy growth of oaks and maples. For the most part, also went about 3 miles up the creek. There I found quite a heavily wooded "bottom" a ravine was found in which there were many turkeys but no birds of note were seen there. The following list of birds were seen during the day.

Ther.

TUES. FEB. 28, 1893

Wea.

New Paris June 3, 93
✓ Baltimore Oriole.

A male seen about the house.

✓ Chipping sparrow. C.

✓ House wren

A pair near the house

✓ Barn swallow

Common

✓ Chimney swift

Very common

✓ Song sparrow

many seen

✓ Field sparrow.

A few noted

✓ Brown thrush

2 seen

✓ Red-eyed vireo

Very common

✓ Crow

cc

cc

✓ Indigo bird

Several seen

✓ Red-headed vireo.

Seen wherever there are

Ther.

SUN. JAN. 9, 1893

Wea.

Ther.

TUES. FEB. 28, 1893

Wea.

MON. JAN. 9, 1893

[Faint, illegible handwritten text on the left page]

[Faint, illegible handwritten text on the right page]

- ✓ Call. dead trees
- ✓ Crow bird
Many heard and seen in the woods
- ✓ White B. Nuthatch
Very common.
- ✓ Great Crest. Flycatcher
Quite common
- ✓ Y B Cuckoo
several heard
- ✓ Chest side Warbler
Three singing males seen. One nest found.
- ✓ Maryland Yellowthroat
Not common one or two seen
- ✓ Ruffed Grouse
One heard drumming
- ✓ Wood Pewee
Common in deep woods
- ✓ Redtail Hawk
One seen in woods
- ✓ Flicker
several seen
- ✓ Scarlet Tanager several seen and heard

- ✓ Sharp shinned Hawk
One seen
- ✓ King bird
Common
- ✓ Meadow Lark
Several seen
- ✓ Mourning Dove
two or three seen
- ✓ Redwing blackbird
A number seen about the small meadows.
- ✓ Yellow Warbler
A pair about the house
- ✓ Catbird
Common
- ✓ Pileated Woodpecker
One seen
- ✓ Quail
Several heard up the creek
- ✓ Night Hawk
Quite common
- ✓ Robin
One or two seen

✓ Pewee

Lute common

Cedar Bird 2 or 3 seen

Birds accidentally seen
Sunday June 4
not seen the day before

✓ Goldfinch

✓ Green Heron

✓ Redbellied Warbler

✓ Tufted Tit

✓ Grass finch

✓ Purple grackle

✓ Cowbird

✓ Cave Swallow

✓ Spotted Sandpiper

✓ Redstart

✓ Sparrow Hawk

✓ Redshouldered Hawk

June 5 New Paris

Chipping Sparrow C

Goldfinch Several

Crow Blackbird "

Crow C

Red-bellied Warbler 1

Red-eyed Vireo v. C.

Baltimore Oriole Several

Redwing blackbird C

White B Nighthawk C

Pewee C

Hooded Merganser Several

Redhead Warbler v. C.

Yellow B Cuckoo Several

✓ Cerulean Warbler One

heard and seen in

some high rocks in a

part of Chestnut Ridge

I got a good sight of

it and identified it

beyond question but

did not succeed in

securing it.

Great Crested Flycatcher, C	
Field Sparrow	Several
Indigo bird	Common
✓ Leconte's	One seen
Grass finch	Several
Common bird	Common
Flicker	2
✓ Broadwing Hawk	1
✓ Woodcock	2 were
started in the edges	
of fields near small	
brooks	
Brown Thrush	2
✓ Tanager	Several
✓ Y. B. Chat.	One shot.
Mourning Dove	Common
✓ Killdeer	One seen
Night Hawk	Several
Kingbird	Common
Rough Sparrow	" 7.C.
House Wren	Several
Meadow Lark	"
Bluebird	"

June 6

Came up the mountain from New Paris this morning. It was rainy and birds were not plentiful when about half way up the mountain. Heard wood thrushes and one or two chestnut sides. The woods on the east side is composed mostly of oaks, chestnuts and maples, no cypresses being found to speak of. As one starts down the west side, however, a change is at once seen. Hemlocks increase until here about a mile from the top they are about

don't. Evening to rain
but few birds were
seen today

A few birds noticed
on the way up

- Bluejay
- Chestnut side W.
- Redstart
- Wood Thrush
- Red-eyed Vireo
- Indigo bird
- Ruffed Grouse

Birds seen at
Crumbs

June 6, '93

- ✓ Chimney Swift C
- ✓ Barn Swallow C
- ✓ Crow V.C.
- ✓ Snowbird Abundant
- ✓ Oriole C
- ✓ Robin C
- ✓ Red-eyed Vireo V.C.
- ✓ Maryland W. 1 seen
- ✓ Catbird a few
- ✓ Broad wing Hawk
a pair seen
- ✓ Velvety Thrush 2
- ✓ Y-B Oriole 1

Ther.
FRI.TUES. FEB. 28, 1893
THURS. JAN. 19, 1893Wea.
Wea.BIRDS seen at
Crumbs June 7, 93

Robin	C
✓ Song Sparrow	C
✓ Catbird	Several
Red-eyed Vireo	VC
✓ Solitary Vireo	2
✓ Blk thro Blue W.	1
Swainbird	C
Bluebird	Several
Chimney Swift	C
Indigo bird	C
Barn swallow	Several
Canadian Warbler	1
Winter Wren	one heard
Hermit Thrush	3
Field sp.	2
Parula	Several
Crow	VC
Robin	1
Redhead Warbler	2
Chimney	2
Hairy Woodpecker	1

June 8, 93

Wilson's Thrush	Several
heard and seen	
Countbird	VC
Swainbird	C
Robin	C
Grouse	one heard
Barn swallow	Several
Chimney Swift	C
Blackburnian Warbler	1
Blk thro Blue	3
Crow	VC
Hairy Warbler	2
G. B. Woodpecker	1
Redhead	C
Solitary Vireo	2
Red-eyed	VC
Scarlet Tanager	2
Chestnut sided W.	2
Indigo-bird	C
Wood Thrush	2
Song Sparrow	C
Brown Creeper	1
Grass Finch	1

Bluejay	2
Field Sparrow	Several
Parula	2
Meadowlark	1
Flicker	2
Whippoorwill	1
Cedar bird	several seen
Hummingbird	1 ♀ seen

Crumms June 9.
 Investigated a high ridge on which were growing some large patch pines. It is probably the highest part of the grits in this vicinity. I found the top to be covered with a thick growth of scrub oaks and blueberry bushes, with large patch pines scattered over it. Chestnut sides and Maryland yellow pines proved to be quite common here. Also found a yellow B Chat. Found a nest of the Wild Turkey in the edge of the chestnut woods bordering the "barren". It contained fourteen eggs owing to the eggs being in

an advanced stage
of incubation, I did
not disturb them or
the bird. following is
a list of birds seen
during the day.

Flicker several seen
Y. B. Warbler one seen
Snowbird several were
seen and a nest
was found nearly
finished.

Canadian Warbler
a pair was found
in a laurel thicket.

Water Thrush
One was seen in
the thicket and a
nest found nearly
finished.

Red-eyed Vireo F.C.

Robin C

Blk cap. Chickadee

two were seen

Song sparrow C

Cowbird number heard

Blue jay one heard

Crow common as usual

Red shouldered Hawk
One was seen on the
hillside

Red tail Hawk
One seen

Bluebird several

Chimney Swift several

found on mountain
Yellow B Chat one shot
Chestnut side C

White throat nuthatch
Several were heard
in the creek bottom

Cedar bird several

Wilson's Thrush several

Cuckoo one heard

Chimney Swift C

Barn Swallow C

June 10, '93

Brown Thrush

One heard in the early morning
Yellow B Woodpecker
One seen

White B Nuthatch
Several seen

Snowbird
common

Robin V.C.

Red-eyed Vireo V.C.
Chipping Sparrow
A pair seen near the house

Corvid
Very common as usual.

Tree Sparrow V.C.
Goldfinch Vireo
One shot.

Tanager
several noted

Melospiza Thrush C.

Rosebreasted Grosbeak
One killed

Canadian Warbler
Several seen

Waterthrush
Downy Woodpecker
One seen.

Harry Woodpecker
Two seen

Mourning Dove.
Two or three seen

Kingbird a pair seen near the house

Least Flycatcher
One seen

Chestnut-sided Warbler.
several

Woodthrush one or two heard
Brown Creeper

A nest of this species was found containing young. It was behind a loose plate of bark on the trunk of a dead hemlock tree 10 feet high

June 12 Lewis.

Robin V.C.

Chimney C.

Yellow B. Warbler

Several seen

Indigo Bird V.C.

Chipping Sparrow

Several seen

Black-thr. Blue Warbler

Several

Solitary Vireo

Three or four heard
and seen

Water Thrush One heard.

Swainson's Very common as usual

Indigo Bird Com. as usual.

Flicker a number seen

Downy Warbler One seen

also nest found.

Chestnut-side Warbler

found to be quite common
in a sort of grass which
had been burnt over and
had grown up to bushes

Hermit Thrush. Quite common

in the above locality

Red-breasted Nuthatch

One or two heard singing in
thicket by a small brook

Wilson's Thrush Several noted

Song Sparrow V.C.

Hairy Warbler Several noted.

✓ Magnolia Warbler a pair secured
as well as their nest and
eggs

✓ ~~Chestnut-side Warbler a pair secured~~
~~as well as their nest and~~
~~eggs~~

✓ Night Hawk. Several heard
and seen in the evening

June 13

Crumbs to Ritz Mills,
Belt that Blue bird seen
Canadian Warblers several
Horned Thrush

Journal noted

✓ Belt that Green Warbler.

A male bird was seen
about a mile from
Crumbs, but it escaped.

Warbler

Journal noted

Chestnut ^{tree} common along
the road

Hemlocks. Spruce & fir
scarce at Ritz and
white pines & take their
places. These continue to
be found for about 3 miles
and then disappear and
as Hornersville is near
no conifers at all are found
On approaching Hornersville
Wood and Wilsons Thrushes
were observed as well as

Spotted sandpeppers and

Night Hawks

The country here seems
to be made up of
small steep and rounded
hills which are covered
with woods composed
mostly of oak ^{chestnut} and maple

Honesville June 14 '93

Went round the hills nearly all day. Most of my finds were found on a hillside grown up to bushes and

brush. Following is a list
 Peewee. Several seen about houses and bridges

Wood Pewee

Common in the woods

Purple Grackle

Seen near the town

Redwing Blackbird

Seen about a small mead.

near the town

Red-eyed Vireo

Very common everywhere

Scarlet Tanager

Several seen and heard.

Ballou's Oriole

Several about the town

Robin

Very common everywhere

Worm-eating Thrush

Quite common

Wood Thrush. another common

species in the woods

Flicker

A number seen

Long sparrow.

common everywhere

Redtail Hawk two noted

Chimney Swift Very common

Catbird

4

Rosebreasted Grosbeak

A number seen

Chestnut side Warbler.

common on the hillsides

Yellow Warbler

common about town

Maryland yellowthroat.

Seen on the hillside

Oratorbird

Common in the woods

Chimney Swift

Very common

Barn Swallow

common about houses.

Earl's Bunting

A few seen

Yellow B Chat - several seen

Am Goldfinch

Common about the town

Sharp-shin Hawk

A bird of this species
was seen which had in
its talons a small bird
which it was preparing
to eat

Mourning Dove

Quite common

Field Sparrow

A number of pairs
seen

Brown Thrasher

Several seen

Crow. Common

Blue Jay. A number heard
in the woods

Grass Finch

A number seen
about the fields

Yellow Billed Cuckoo

One seen

Spotted Sandpiper

Seen in the fields and

about Stony Creek

Great crested Flycatcher

One seen

Cherry Bird

A few seen

Kingbird. Two or three seen

Red-eyed Vireo

One seen in a garden

Chipping Sparrow.

Seen near the town

Night Hawk

Numbers seen at evening

Indigo Bird

Two seen by

roadside

Flowbird

Two or three seen in

a field

Quail

Heard near RR station

Whippoorwill

One heard on my return
to Horroville June 20.

Hoversville & Straytown
 no bird of importance
 was seen At Stray-
 town a few juncos and
 Nuthatches were seen
 These increased to about
 Celmans and then
 disappeared. Meadowlarks
 seen at Celmans and
 below. Robins, Fair
 mallows and chimney
 swifts seen everywhere

Birds seen at
 Somerset June 15, '93
 Purple Martin
 common about town
 Chimney Swift
 common
 Bobolink
 several seen in a
 field near town
 Song sparrow
 very common
 Meadow Lark
 common about fields
 Purple Grackle
 a number seen
 Chipping Sparrow
 very common
 Spotted Sandpiper
 One seen at a small
 brook
 Redwing Blackbird
 several seen in
 fields near town
 Crow. common One was
 seen carrying away
 a young Rabbit with

the old ones in pursuit
Flicker

Several observed
Chipping sparrow
Common

Field sparrow
A number seen

Red-eyed Vireo
Very common

Woodpecker
Several seen

Bluejay
Very common

Brown Thrush
Common

Catbird common

Maryland yellowthroat
a number seen

Black and white Creeper.
One seen

Chestnut side Warbler
Common

Hermit Thrush
Several seen and
heard and appar.

cutly common
Solitary Tareo

One seen
Night Hawk common

Cherry bird "

Cornbird several heard

Indigo-bird
One seen

Yellow B Chat
two others observed

Green Heron
One observed

Bluebird common

Melrose Thrush
Several were heard

One Goldfinch
a common species

Parula
One or two seen

Blk thro Green Warbler
One seen among some

white finches
Canada Warbler

Several seen
Harry Wapler. a Pair seen

Black cap chickadee
 One or two heard
 Blk Thrst Blue Warbler
 One seen
 Scarlet Tanager
 One net with
 Mourning Dove
 One net with
 Barn Swallow
 Common everywhere
 Whippoorwill.
 One heard in evening

Sunset For June 16
 To the south of the
 town is quite a large
 extent of country
 which evidently used
 to be covered with
 a heavy growth of pine
 and Hemlock ^{most of} this
 has been cut away
 by piece-meal clear-
 ing small portions of
 it intact or partly so
 large areas have grown
 up to oak bushes and
 Laurel and here
 Hermit Thrushes, Chestnut
 sided warblers, Chewinks
 and other birds were
 common. Canadian
 Warblers were common
 along a creek which
 flowed through this
 tract as well as

Melons Thrush and
 a few Black-thr. Blue
 Grackles. 3 or 4 that
 Green Warblers, were
 found on the hillsides
 among the pines.

Nearly all the species
 observed on this and
 the preceding day
 were found here this
 tract.

Following is a list

Bobolink.

seen near town

Purple Martin

common about town

Robin V.C.

Song sparrow V.C.

Meadow Lark

Several were
 seen near the town

3 albinos Crows

found about houses.

Chipping Sparrow.

a very common bird
 Chestnut-side Warbler
 Common

Redwing Blackbird

Common about

the fields and meadows

Catbird V.C.

Field sparrow V.C.

Chimney a nest found
 in trunk of woodcut stump

Blk Cap Chickadee

One or two.

Brown Thrush Common

Red-eyed Vireo V.C.

Bluejay Common

Crow Bird

Heard constantly

Scarlet Tanager

Several observed

Mourning Dove

One pair seen

White B Nuthatch

Several seen

Solitary Vireo a single seen

Harry Waples

Several seen
Back that Green Warbler.

A pair seen
Hermit Thrush

Very common
Flicker

Several seen
Maryland Yellowthroat
Common in the
oak bushes.

Back that Blue W.
Two or three seen

Canadian Warbler V.G.

✓ Ruffed Grouse
One seen in
deep woods

Rose breasted Grosbeak
One met with in
oak woods.

B. Luteoides Common

Yellow B. Chat
Several observed

Orange Ford
Several seen

Melons Thrush

Very common in
low woods
Sharp shinned Hawk
One seen at the
edge of woods

Wood Pewee
Heard almost
every where

Peepke Grackle
A number seen

Somerset Pa
June 17 '93

A section of country
to the north and
east of the town
was explored today
A small swamp grown
up to elder and other
bushes was entered
and a colony of
Grackles was found
as well as Acadian
Flycatcher and
Green Heron.
Blue that Green Grackles
Hermit Thrushes and
yellow bellied Sapsucker
were seen in a piece
of woods of pine
oak and chestnut
The following birds
were observed

Meadow Lark
Seen in fields
near town

Redwing Blackbird
seen in same
situation as last.

King bird
One seen by
side of railroad

Purple Grackle
A large number
observed

Robin Pl.
Bluebird Common

Acadian Flycatcher
Several seen
Green Heron

Long Sparrow
One seen
Very common

Am Goldfinch
Quite common

Chimney
Several observed

- Brown Thrasher
Several seen
Catbird
Common
Field sparrow.
Common
Chestnut-sided Warbler.
abundant
Ovenbird
A number heard
Wood pecker
Very common
Flicker
Several seen
Pewee
One or two
✓ Spotted Sandpiper
A pair seen in a
pasture.
Red-eyed Vireo
Very common
✓ Killdeer
A pair seen in
the fields

- ✓ Grass finch
Very common
in the fields
✓ Yellow wing sparrow
Several observed
✓ Yellow Warbler
One seen in an
orchard
Bluejay
Common in
the woods
Crow
A number seen
✓ Redhead Warbler
A pair seen near
their nest.
✓ Red shouldered Hawk
One seen
Chipping sparrow
Common
✓ Gold Crest flycatcher
One seen
✓ Yellow Bellied Warbler
One started from its
nest

Blk that Green
 Warbler
 A pair seen in
 deep woods
 Hermit Thrush
 Seen in same
 situation as last.

Haverhill to
 Jenners Cross Roads -
 June 21, '93
 Some Canadian country
 about halfway between
 Haverhill and Jenners Cross
 Roads but no Canadian
 birds observed. No
 conifers at Jenners X
 Roads. Horned Larks and
 quail seen between June 22
 J. X Roads and Jennerstown
 June 22

Birds seen between summit
 of Laurel Ridge and
 Laughlinstown.

Blk that Blue Warbler
 Wilsons Thrush

Snowbird

Canadian Warbler

Wood Thrush

Meadow Lark

Spotted Sandpiper

Laughlinstown

Westmoreland Co Pa

June 23. 1893

Robin common everywhere
Crow Blackboard.

common about town

Cattbird

Very common

Woodthrush

Very common

Field Sparrow.

Common

Chestnut-sided Warbler

found near town and
also on top of the Mt.

Crow bird

A very common species

Red-eyed Vireo

Very common

Chimney

Abundant.

Yellow-bellied Chat.

found on the hillsides about
the town

Red Goldfinch

A few seen

Flicker

One or two seen

Crow

abundant.

Song sparrows

Very common.

Baltimore Oriole

A few about town

Brown Thrasher

Quite common

Downy Warbler.

A pair seen

White-bellied Nuthatch.

A few observed

Chipping Sparrow.

abundant.

Indigo Bird

Common

Military Vireo

Quite common about
 Laurel Ridge

Black-throated Blue Warbler

common in the ravines
and on the hillsides of

Laurel Ridge

Canadian Warbler

A very common
species

Blk and yellow Warbler

A few seen about the
Ridge

Blk and green W.

Two or three seen

Redstart

A female seen

Scarlet tanager

Common

Rose breasted Grosbeak

A number seen on the
Ridge

Melano Thrush

Very common

B & W Warbler

One seen

Blk billed Cuckoo

A nest of the species
was found containing one
young one about half grown.

Woodpecker

Not common One seen

Yellow billed Cuckoo

One was shot

Meadow Lark

Common about town

Mourning Dove

Quite common

Whippoorwill

Several heard

in the evening

Loughlinstown

June 24, 93

House Wren

One heard

Barn Swallow

a common species about the town

Crow Blackbird

Quite common about the town

Earle Swallow

A few pairs about town

Red-eyed Vireo

abundant

Indigo Bird

Very common

Catbird

abundant

Robin

Very common

Cherrite

Very common

Crowbird

Very common in the woods

YB Chat

common on the hillsides

Field Sparrow

VC -

Chipping Sparrow

very common species

Crow

common

Mourning Dove

one or two seen

Brown Thrasher

common

Flicker

a few seen

Downy Warbler

one seen

Ruby Throat Hummer

one seen

Scarlet Tanager

common

Long Sparrow

Very common

Broad-wing Hawk

The stomach of one

Ther.

WED. MAR. 1, 1893

Wea.

Billed. contained
remains of grasshoppers
and other insects.

Linnbird

Several seen

on Laurel Ridge

Canadian Warbler

Very common ~~one~~
in the Ridge

Chestnut side Warbler.

A number seen
about the Ridge

Black throated Blue Warbler

Very common

Red & Or. Warbler

Several seen

Indians Thrush

Very common
in the Ridge.

Woodcock

One seen at the
head of a ravine
near the top of Laurel
Ridge

Siskit Green Warbler

Ther.

THURS. MAR. 2, 1893

Wea.

One or two seen

Pewee

One seen in town

Chimney swift.

Common

King bird

A few seen

Ther.

FRI. MAR. 3, 1893

Wea.

Laughlontown June 25

Yellow Warbler.

One noticed in a
garden in town

Chipping sparrow
abundant.

House Wren

One noticed in town

Bluebird

Several seen between
Laughlontown and Ligonier
Meadow Lark

common about the
fields

Robin

abundant.

Redwing Blackbird

Several seen in the
meadows toward Ligonier.

Cowbird

A number seen near town

Purple Martin

A number noticed

Grass Finch

Several seen

Ther.

SAT. MAR. 4, 1893

Wea.

Laughlontown

June 26 '93

Green Heron

One noticed flying
over the meadows

Yellow rumped Sparrow

One seen on the fence
by the roadside.

Ther.

SUN. MAR. 5, 1893

Wea.

6

Two miles South of
Idleroid Westmoreland Co
June 26 Pa

Crow.

Several seen in fields
and woods

Great crested Flycatcher

One or two seen in woods

Yellow Warbler

One seen near house

Red-eyed Vireo

Very abundant

Cherrub

One or two seen on
hillside

Songbird

Very common

everywhere

Field sparrow

common about bushy
fields

Hooded Warbler

One secured in a hillside
grown up to small bushes

Ther.

MON. MAR. 6, 1893

Wea.

Crowbird

a very common
species in the woods

Wood Thrush

Common in the
hillsides

Whippoorwill

One heard in the
evening

Ther.

TUES. MAR. 7, 1893

Wea.

June 27.

Explored the Hillside
toward Idlewild to some
extent. Very rainy but
quite a lot of birds
observed. Sketched Blue W.
the only Canadian species
found. Following is a
list of birds seen.

Red-eyed Vireo abundant -
Ovenbird. very common
Dmg. sparrow
a few seen and
one nest found with eggs -
Wood thrush

Evidently common; one
nest containing eggs
found.

Black-throated Blue Warbler
One seen on the hill
side in quite heavy
woods.

Ther.

WED. MAR. 8, 1893

Wea.

Black and white Warbler
Several seen
Meadow lark.

a very common
species everywhere
Robin

Several observed
Scarlet Tanager

Several noticed
on the Hillside
Rose breasted Grosbeak
One seen by roadside
in woods.

Ruby-throated Hummer
One noticed about
Laurel blossoms.

Blue jay
Several heard in
woods.

Redwing Blackbird
Common along Iron
mine Run.

Meadow Lark
One or two noticed
in meadows.

Ther.

THURS. MAR. 9, 1893

Wea.

Yellow B Chat

- a very common species
in open hillside

Flicker

Several noticed

Woodpecker

Several noticed

in woods on hillside

Spotted Sandpiper

Noticed in a field

by side of road.

Redstart

Several pairs found
and one nest about

30 feet high in white

oak

Field Sparrow

Common by the

roadside

Chipping Sparrow

quite common

Leatherbird

Common on hillside

Am Goldfinch

One or two noticed

Ther.

FRI. MAR. 10, 1893

Wea.

Mourning Dove

Several seen

Great crested flycatcher

Several noticed on edges

of woods

Red head Woodpecker

One noticed in

long ground

Yellow throat Vireo

One shot by roadside

Cardinal

One seen by roadside

and others heard

Ball's Owl

One seen in trees

by roadside

Red bellied Noddy

One seen in high

dead tree in woods

Ruffed Grouse

One heard clucking

and another started

Crow

Very common

Ther.

SAT. MAR. 11, 1893

Wea.

Brown Thrasher

A pair seen by roadside

Crow Blackbird

One seen on tree
in meadow

Yellow Warbler

One seen at edge
of woods

White B Nuthatch

A few noticed
in woods

Chestnut-sided Warbler

Two observed on
hillside

Blue-golden-wing Warbler

One seen in hillside
growth & bushes.

Hooded Warbler

One seen in same
situation as last

Ther.

SUN. MAR. 12, 1893

Wea.

2 miles to Idlevold

June 28

Explored a portion of the
valley of Four mile Run
and adjoining hillsides.
The following species were
noted.

Yellow Billed Cuckoo.

Several seen and
a nest found in a laurel
bush containing two
young.

Indigo Bird

A very abundant
species

Woodthrush

Very common a
nest found on horizontal
limb of tree about 15
feet from ground

Downy Woodpecker.

One or two noted

Robin

Very common

Ther.

MON. MAR. 13, 1893

Wea.

Red-eyed Vireo

Very common

Redstart

A number observed

W. B. Nuthatch

Quite common

Cross Blackbird

A number seen
in a ravine through
which flowed a small
stream.

Gill's Bristled Chat

Quite common in
the thickets on the

Hillsides

Ruffed Grouse

One or two heard

drumming

Hooded Warbler

This species seemed
to be quite common in
the thickets and one
was seen in the
high oaks on a
hillside

Ther.

TUES. MAR. 14, 1893

Wea.

Scarlet Tanager

An abundant species

Redwing Blackbird

Common in the
meadows, along Four-
mile Run

Redtail Hawk

An individual of
this species was seen
about the Ridge
Creek.

Very common

Cattbird

Very common

Flicker

Several observed

D. or. Creeper

Evidently quite common

Rose breasted Grosbeak

Several seen

Chickadee Warbler

One shot in a thicket
on a hillside but no
others observed during the
day

Ther.

WED. MAR. 15, 1893

Wea.

13th that Blue Warbler
One seen on the
Hillsides where it
was partly cleared
Pewee

One observed
Yellow throated Vireo
Several noted

Ther.

THURS. MAR. 16, 1893

Wea.

June 29
Crossed Chestnut
Ridge and proceeded
toward Mt Pleasant
when crossing the
Ridge the following
species were seen
Academe flycatcher
One seen in ravine
by a small brook

Pewee

Several seen and a
nest found in a
small cave by roadside
Barnswallow

Common about houses
Chimney swift

A number seen
Earl swallow
Quite a number
observed

Bluebird

Quite common

Y B Chat

Quite common

Ther.

FRI. MAR. 17, 1893

Wea.

Gross Finch
Large numbers
were seen along the
roadside.

Horned Lark
a small flock
was seen in enter-
ing Mt Union.

Bobolinks were common
just below Mt Union
7 males being seen
at one time
A Savannah Sparrow
was seen about 3
miles below Mt
Union

Ther.

SAT. MAR. 18, 1893

Wea.

June 30

Mount Pleasant.
Redwing Blackbird
Common about the
meadows and low fields

Crow Blackbird
A common species
Cowbird

A large number of
these birds were seen
in a pasture in which
was a herd of cattle
Chipping Sparrow
Very common

Song Sparrow
abundant

Gross Finch
Large numbers
seen about the fields
Meadow Lark

A common species
Flicker
Several observed

Red Headed Wren
Quite a number seen

Wood Thrush

Several observed
in a thick piece
of woods.

Purple Martin

Abundant about

the town

Barn Swallow

Large numbers

seen about farm buildings

and along the roadsides

Chimney Swift

Very common

Crow

Common

Robin

abundant

Catbird

Very common

Field Sparrow

Very common

Cherrybird

an abundant

bird in the thickets

Indigo Bird

A very common

species as usual

Hairy Woodpecker

Quite a number

observed

Pewee

Several seen near

buildings

Kingbird

Quite common about

fields and orchards

Am Goldfinch

Several seen by

the roadside

Yellow Breasted Chat

A number of this

species were noted

in the thickets

Maryland Yellowthroat

Two or three noted

Crows

Several seen in a

piece of thick woods

Ther.

TUES. MAR. 21, 1893

Wea.

Red-eyed Vireo

A common species

Scarlet Tanager

Several noted

Downy Woodpecker

One noted

Bluejay

Several observed

in the woods

Woodcock

two started in a

thick piece of woods

Night Hawk

Several noticed

through evening

Even Swallow

Quite common

about buildings

Baltimore Oriole

One seen in a piece

of oak woods

Spotted Sandpiper

Several seen in the

vicinity of a small stream

Ther.

WED. MAR. 22, 1893

Wea.

Bobolink

Several noted in

a low field

Lark

two or three heard

about the fields

Yellow-rumped Warbler

Several noted

by the roadside

Bluebird

Quite common

Great Crested Flycatcher

two or three noticed

in a piece of oak woods

House Wren

A pair seen by the

roadside

Brown Thrush

One seen

yellow-billed cuckoo

Several noted

Whippoorwill

One heard in

the evening

Wt Pleasant
July 1st.

Purple Martin
Common

Chimney Swift
A number noticed

Long sparrow
Numbers seen
along the roadside
and elsewhere

Chipping sparrow
Common about
houses

Robin
An abundant species

Calbird
Very common

Bluebird
A number noted

Kingbird
Several seen
about orchards

Barn swallow
Common about
buildings.

Meadowlark
One noted in a
piece of oak woods

Flicker
One or two noted

Killdeer Plover
Several seen about
a field

Case swallow.
A number noted

Green Heron
Two noted in the
vicinity of a creek

Crow Blackbird
Abundant

Redwing Blackbird
Quite common about
low ground.

Spotted sandpiper
Several seen in the vicinity
of a small creek

Ther.

SAT. MAR. 25, 1893

Wea.

Parula

Common near houses

Grass finch

Very common

about the fields

Baltimore Oriole

A young bird

seen by the roadside

Am. Goldfinch

A number seen

Ther.

SUN. MAR. 26, 1893

Wea.

Mt Pleasant

July 3, '93

Yellow Warbler

One noticed in

a garden in town

Robin

abundant

Catbird

Very common

Long Sparrow

Numbers seen

Grass finch

Large numbers

noticed in the fields

Chipping Sparrow

Abundant

Redhead Warbler

A number seen

Downy Warbler

One noted in a

piece of thick woods

Red-eyed Vireo

Very common

Ther.

MON. MAR. 27, 1893

Wea.

Crowbird

A large number
seen in a thick
piece of woods east
of the town

Indigo Bird

Very common

Chimney Swift

Common

Meadow Lark

Abundant about
the low fields and
meadows.

Blue Jay

Common

Crow

Common

Chimney Swift

A number seen

Barn Swallow

very common

Purple Martin

Very common

about the town

Wood Pewee

several noted

Ther.

TUES. MAR. 28, 1893

Wea.

Scarlet Tanager

One or two seen
in the thick piece
of woods before mentioned
Detail

Heard on one or two
occasions

Wood Thrush

Le. Thrush

Yellow S. Cuckoo

Cuckoo was com-
mon and one was
promptly identified
as of this species

Field Sparrow

abundant about
brushy fields.

Chestnut side warbler

Two pairs were seen and
one nest found containing
three eggs

Cardinal Grosbeak

a pair seen in
the thicket

Hooded Mble

One shot in a
thick piece of woods

Black billed Cuckoo

One shot.

Woodcock

One was started
in the thicket

Carolina Chickadee

One killed in
the thicket

Ruffed Grouse

A female with
a brood of young
was seen in the
thick piece of woods
where nearly all the
observations were made.
The young were but a
few days old but
could fly well.

Lumont Station

July 4. '93

Wood Thrush

Very common

Robin

A number seen

Cardinal

Quite common in

the thickets

Scarlet Tanager

One seen in a
cherry tree

Cherry Bird

Common about

the cherry trees

Whip-poor-will

One or two heard
in the evening

Chipping Sparrow

Several seen

Yellow Billed Chat

Several noticed in
the thickets

Ther.

FRI. MAR. 31, 1893

Wea.

Lemont Station

Fayette Co. Pa

July 5, '93

Wood thrush

Very common in the slopes of Chestnut Ridge. A nest found containing eggs.

Cardinal

Several noticed near the foot of the Ridge. Red-eyed Vireo abundant.

Kentucky Warbler

Found several in adult and young on the side of the Ridge. Hooded Warbler

Found to be quite common on the lower part of the slopes.

Downy Warbler

Also noticed on the hillside.

Ther.

SAT. APRIL 1, 1893

Wea.

Louisiana Warbler

One was noted in the woods of oak and chestnut crossing the Ridge.

Corvidae

Several species of B & W Creeper. Several seen on the ridge. Y. B. Chat.

One noted in a chestnut near the top of the Ridge.

Cherrybird

Quite common in the thickets.

Louisiana Water Thrush

Several met with along a stream which comes out from the ridge. Song Sparrow. Several noted.

Kingfisher

Two seen at a small reservoir pond.

Ther.

SUN. APRIL 2, 1893

Wea.

Acadian Flycatcher

One met with

near a small brook

Blk thro Blue Warbler.

One noted in the

oak woods near

base of ridge

Parula

One shot in edge

of woods

Redstart

Quite common

Chestnut side Warbler.

One met with

in woods near base

of Ridge

Whip-poor-will.

Heard in evening

Chimney swift

A few noticed

Ther.

MON. APRIL 3, 1893

Wea.

Lewiston Station

July 6

✓ Wood thrush

A large number
seen on the hillside

✓ Robin

Very common

✓ Catbird

Several noticed and

one killed in the

thickets near base

of Ridge

Red-eyed Vireo

abundant everywhere

Kentucky Warbler

One met with in a

partially cleared place

on the hillside

Hooded Warbler

Several seen near

base of Ridge

Downy Warbler

One or two seen on

the hillside

Ther.

TUES. APRIL 4, 1893

Wea.

✓ Brown thrasher

Several seen in a field
grown up to bushes

Clipping sparrow

Very common about
fields and near
buildings

Long sparrow

A number seen

Chat.

Two or three noted in
a bushy field

Catbird

Several seen in

the same locality

Woodpecker

One seen on

the edge of woods

Crow

Very common in

all the woods

Redstart

Several noted

Flicker

Two or three seen in

Ther.

WED. APRIL 5, 1893

Wea.

The woods

Scarlet tanager

Several seen about

Chestnut Ridge

Great crest flycatcher

One met within

side of Ridge

Crow

Several noted

Long sparrow

Seen about the

reservoir

Ruffed Grouse

One started on

the side of the Ridge

Chestnut side. Warbler

Met with in a partially

cleared tract on side

of Ridge

Blue Jay

One killed on

side of Ridge

Water Thrush

One shot at a

small creek

Ohio Pyle
July 7, '93

Robin

Very common along
the river

Red-eyed Vireo

Extremely abundant.

Song sparrow

A number seen

Barn Swallow

Many seen along
the railroad near
the town

Purple Martin

a good many
about the town

Pewee

A number seen along
the river

Indigo Bird

Especially common
along the river and
on the hillsides

Redstart

Several noted

Bt or Creeper.

Several seen

in the woods by the
side of the R.R.

Rough wing Swallow

Large numbers
observed flying about
over the river.

Centrod

Very common

Wood Thrush.

Very common
on the hillsides

Scarlet Tanager

Several seen

Downy Woodpecker

Several noted

Kentucky Warbler

One was heard
by the bank of the
creek

Flicker

A number seen

Ther.

SAT. APRIL 8, 1893

Wea.

1 Rose B Grosbeak
 Several seen
 on the hillside
 Oriole
 Very common
 Chipping Sparrow
 A common species
 Spotted Sandpiper
 A number noticed
 along the creek
 Blue Jay
 Several seen
 in the woods by
 the RR bank
 Brown Thrasher
 One seen in a
 thicket by the side
 of the RR.
 Wood Pewee
 One seen
 Harry A. Driskill
 One killed on
 the hillside
 Mourning Dove
 A pair seen.

Ther.

SUN. APRIL 9, 1893

Wea.

Chris Pyle
 July 7, '93
 Red-eyed Vireo
 Many seen
 Robin
 Very common
 Leathbird
 found very commonly
 along the river
 Song Sparrow
 Very common
 Chipping Sparrow
 A number seen
 Maryland Yellowthroat
 One noted near the
 river
 Chat.
 One was heard in
 the bushes from way
 on bank of the river
 Many were
 abundant in
 all the thickets
 Rough N. Swallow
 Numbers seen

about the river

Barn swallow

Common about the town

Am Goldfinch

A number seen

along the river

Crows

Common about

the hillsides

Cherry bird

A number seen

along the river

W. or W. Wren

A pair seen on

the hillside

W. Nuthatch

A pair seen

Scarlet Tanager

Several noted

Mocker

Common

Am. Warbler

One or two seen

Flicker

Several noted in the woods on the hillside

Blue Jay

Several noted

Whippoorwill

A female seen in a small ravine

Ruffed Grouse

One started on the hillside in a growth of small oaks

Blk cap chickadee

Two seen among small oaks in a hollow

Chestnut side warbler

two or three seen

in a scrubby portion of the hillside

Chimney swift

A number seen flying about the town

Spotted Peewee

One or two seen along the river

Confluence July 5.

Not located two or three miles in toward Sugarloaf Mountain.

The coopers, ridges covered with quite a heavy growth of oak and chestnut.

The following birds were seen on the way over from Confluence.

Robin

abundant.

Bluebird

Several seen

Crow Blackbird

A number seen

near Confluence.

Redwing Blackbird

Seen about the

river near Confluence.

Cardinal

One or two seen

near Confluence
Cherry bird

Several were pursuing their flycatching about the river near Confluence.

Chipping sparrow

Common everywhere

Parula

Several noted along the route.

Woodpecker

One or two noted

Hight hawk

Several observed in the evening.

Ther.

FRI. APRIL 14, 1893

Wea.

Sugarloaf Mt. July 10

Bluebird

Several observed

Red-eyed Vireo

a very abundant

species everywhere

Chimney

a number observed

Wood thrush

A common bird

in all the woods

Crow

Abundant

Songbird

Four young hatched and one or two

adult birds seen

Blk thro Blue Warbler

A common species

on the side and

summit of Sugarloaf Mt.

Indigo-bird

An abundant species

Ther.

SAT. APRIL 15, 1893

Wea.

Corvid

A common species
everywhere

Blk cap chickadee

Several observed

on the Mountain

Green junc

common in all

the fields on and

about the Mt

Chestnut side Warbler

Several observed

in the partially cleared
tracts

Blk & W Warbler

Very common in all
the woods.

Field sparrow

common in the

bushy fields

Canadian Warbler

a very common

species usually found

in the hardwood
thickets

thickets

Mourning Dove

A few pairs

Observed

Scarlet Tanager

Several seen

around on the Mt.

Thelma Thrush

A common species

on the Mountain

W B Nuthatch

Common in the

oak woods

Catbird

Quite common on the

Mountain side

Redhead Warbler

One seen on top of
the Mt.

Downy Warbler

Several seen

on the Mt.

Brown Thrush

One met with

on top of the Mt.

Long sparrow

Common about the
fields especially in
wet places

Ruby throated Hummer

One met with on

the Mountain

Bluejay

Several seen

Triller

A few seen on the

Mt.

Ruffed Grouse

Several met with

one with a brood of
young a few days old

Harry Warbler

Several seen in

the oak woods

Bronzed wing Hawk

One seen in the

oak woods on the Mt.

Black throated Green Warbler

One met with in the

oak woods

Ther.

TUES. APRIL 18, 1893

Wea.

Woodpecker

A common species
in the deep woods
solitary Vireo

Several noted in
the oak woods on the
Mt.

Whip-poorwill

One noted in
the evening.

Ther.

WED. APRIL 19, 1893

Wea.

Lugardog Mt
Robin July 11

A number observed
Bluebird

One or two seen
Grass finch
Common about the
fields

Chipping Sparrow
Ae abundant bird
about the fields and
near houses

Field sparrow
A number seen

Chimney
A very common
species

Brown Thrasher
One or two observed
on the Mt by the road
side

Flicker
Several seen
Indigo bird
abundant

Red-eyed Vireo
Very common

Chestnut side W.

Several seen

Wilson's Thrush

A number seen and
one shot in a
rhododendron thicket

WS Nuthatch

Common in the

lake woods

Blk thro Blue W.

A number observed
and a nest found
in a rhododendron
bush two feet from
ground mainly com.

lined of strips of
bark and lined
with fine molts
and hair. Young.

Arctonotus

A number seen
in the woods.

Scarlet Tanager
A number seen
Wood thrush

A number seen
Solitary Vireo

With a number
noted in the oak and
chestnut woods on
the Mt.

Woodpecker

A common species
Downy Woodpecker

Several seen
in the woods on the
Mt.

The following species
were seen - ~~Wood thrush~~ C. fulvica

~~Wood thrush~~ -

Purple Martin

Barn Swallow

Tree Swallow

Kingbird

Cardinal

Catbird

Corvidae

The woods on Sugarloaf Mt. are composed almost wholly of oak and chestnut. No cypresses are found at all. The woods deep down form thickets at places especially along the small streams. The Mt. is not well defined in its limits. It being up-hill nearly all the way from Confluence. My stopping place was about 3 miles from Confluence and excursions were made from there to the top of the Mt. 3 or 4 miles further

Birds seen from Rockwood to Negro Mt. July 22, '93

Purple Martin
Common about the town

Barn swallows
Common about Rockwood and suitable places out in the country

Robin
A common species every where

Red-eyed Vireo
Very abundant

Solitary Vireo
Common in the higher woods especially where there are Loblolly

Chipping sparrow
A very common bird

Canadian Warbler
Common on Negro Mt

Ther.

MON. APRIL 24, 1893

Wea.

and along a small
brook near Rockwood
where there was quite
a growth of hemlock
and spruce deciduous
Bk that Blue Warbler

A large number
seen

Wood pewee

A common bird
in the deep woods

Melrose Thrush

A large number
seen

Magnolia Warbler

Quite a number
seen.

Sharp shinned Hawk

Two seen in the
hemlock woods one
of which was shot

Bk cap chickadee

Quite common in the
hemlocks and about
Neyo Mt.

Ther.

TUES. APRIL 25, 1893

Wea.

Orchard

A very common bird
Chestnut side Warbler

Common about
partially cleared
tracts

Indigo Bird

Several seen

Cherry

a common species

Wood thrush

Common about
Neyo Mt.

Worming dove

A few noted

W-B Nuthatch

Quite common

Crow

Common

B & W Creeper

Quite common in
the hemlock woods

and about Neyo Mt
Scarlet Tanager

A number seen

Ther.

WED. APRIL 26, 1893

Wea.

Flicker

A number noted

Ruffed Grouse

One started
in the chestnut woods
on the side of Negro
Mountain

Bluejay

Several noted

Maryland Yellowthroat

One noticed
on the mountain
in a piece of woods
grown up &

Blueberry and other
berries

Yellow B Cuckoo

One seen on
the mt. in the
chestnut woods

Rose B Grosbeak

One seen in the
oak and chestnut
woods.

Ther.

THURS. APRIL 27, 1893

Wea.

Night Hawk

A number noted

around evening.

Grass Finch

A number noted
in a field several
miles south of Rocking
House Inn

House Wren

One seen on com-
pany with a young
one near Negro Mt.
Barrell oak.

One was killed
in the early evening
in a thick hemlock
woods near the base
of Negro Mt.

Whippoorwill

One killed and
several others noted
in the evening

Ther.

FRI. APRIL 28, 1893

Wea.

Rockwood July 13 1893

Carroll's
common about
the town

Robin

Abundant

Chipping Sparrow
Common

Reynolds Vireo
Very common
in the lowland

Solitary Vireo
Several noted
in a piece of hem-
lock woods near
a small stream

Louisiana Warbler
Several noted

Black-throated Blue Warbler
A number seen
in the hemlock woods

Louisiana Water Thrush
One met with
at a small stream
in the hemlock woods

Ther.

SAT. APRIL 29, 1893

Wea.

Pine

One or two noted
in the woods

Several noted in
the hemlocks
Scarlet Tanager
a pair seen

Hummingbird
Several noticed
about the town

Cherry Bird
Several were
seen near Rockwood
from the train as
I left in the evening

Ther. SUN. APRIL 30, 1893 Wea.

Meyersdale Pa

July 14 '93

Purple Martin

Very common about town

Robin

Common in all situations

Pewee

Numbers seen along the railroad and elsewhere

Goldfinch

A number seen

Ingr sparrow.

abundant

Grass finch

common in fields along the railroad

Chipping Sparrow

Common everywhere

Yellow wing Sparrow

One or two seen

in fields along R.R.

Ther. MON. MAY 1, 1893 Wea.

Kingbird

abundant along the R.R. - old and young being in company

Red-eyed Vireo

A very common species

Chewink.

Common on the

brushy hillsides

Scarlet tanager

One or two pairs noted.

Catbird

Very common in the thickets

Brown thrush

Very common in some situations

Wood thrush

Common in

the hillsides in damp woods

Ther.

TUES. MAY 2, 1893

Wea.

Wilson's Thrush

Common in

~~various~~ situations

as last

Chestnut-side Warbler

Very common in the

oak woods on the

hillsides and summits

Bluebird

Observed sparingly

along the RR on the

topography was and

Indica

Flicker

Very common

everywhere

Crowbird

Observed in

nearly all situations

Rusty Blackbird

Very common in

a hillside where it

was seen to feed

on the berries of the

Ther.

WED. MAY 3, 1893

Wea.

Red-bellied Sucker

and also seen elsewhere

Rough-winged Gnatcatcher

A very common

bird in nearly all

situations

Magnolia Warbler

A few or two seen in

the thickets on the

sides of ~~the~~ the Mts

Canada Warbler

abundant in the

thickets

or B Nuthatch

A few seen in the

oak woods on the

Mts.

Harry Wren

Very common

on the hillsides among

the ^{young} oaks

Summit

A number seen in

the hillsides

Ther.

THURS. MAY 4, 1893

Wea.

Ther.

FRI. MAY 5, 1893

Wea.

Ther.

SAT. MAY 6, 1893

Wea.

B & W Creeper

Very common in
the oak woods

Bluejay

Very abundant
species everywhere
Bk the that Blue Jaybler
One or two met with
on the Mt side

Barn swallow.

Common about
the town
Hermit Thrush.

Met with one
out one situation,
on top of the Mt.
where there were a
few pine trees
and small oak
bushes.

Bk cap chickadee
A few seen on
the Mt.

Maryland Yellow throat
Observed on the

Ther.

SUN. MAY 7, 1893

Wea.

Mt in the thickets
of small oaks
Morning Dove

A few seen in the
Mt woods, a nest
found. This was
in a fallen pine
and contained two
young a few days
old.

Mules were
an odd lot
accompanied by a
young one. Was seen
in the thickets
on the hillside
Field sparrow

A few met with
on the Mt.
Night Hawk

Several noted
toward evening
Y B Chat.

Several seen
in the oak bushes on

Ther.

MON. MAY 8, 1893

Wea.

the side of the Mt.
Baltimore Drive

one or two seen
in a bushy hillside
Cherry wood

A few seen in
the hillside

Indigo bird

A few seen in
the oak bushes

Blue & golden wing warbler

a pair, accompanied

by young ones seen

in the oak bushes

in a hillside

Ther.

TUES. MAY 9, 1893

Meyersdale Pa
July 15

Indigo bird

Robin

Bluebird

Long sparrow

Chipping sparrow

Green Finch

Field sparrow

Yellow wing sparrow

Rose B Grosbeak

Maryland

Redhead Warbler

A pair of these
birds was seen in the

telegraph poles across

the railroad between

Meyersdale and the Mt.

Collector

Chimney

Catbird

Redwinged Vireo

Maryland Yellowthroat

Purple Martin

Ther.

MON. MAY 8, 1893
WED. MAY 10, 1893

Wea.

83 am swallow

Goldfinch

21 Blue Jay

Brown thrush

Ring neck

Cat

Chestnut side Warbler

House wren

Corvid

Red start

One or two individuals

were seen in the
hillsides among the small
pines

Golden wing Warbler

Blk headed Warbler

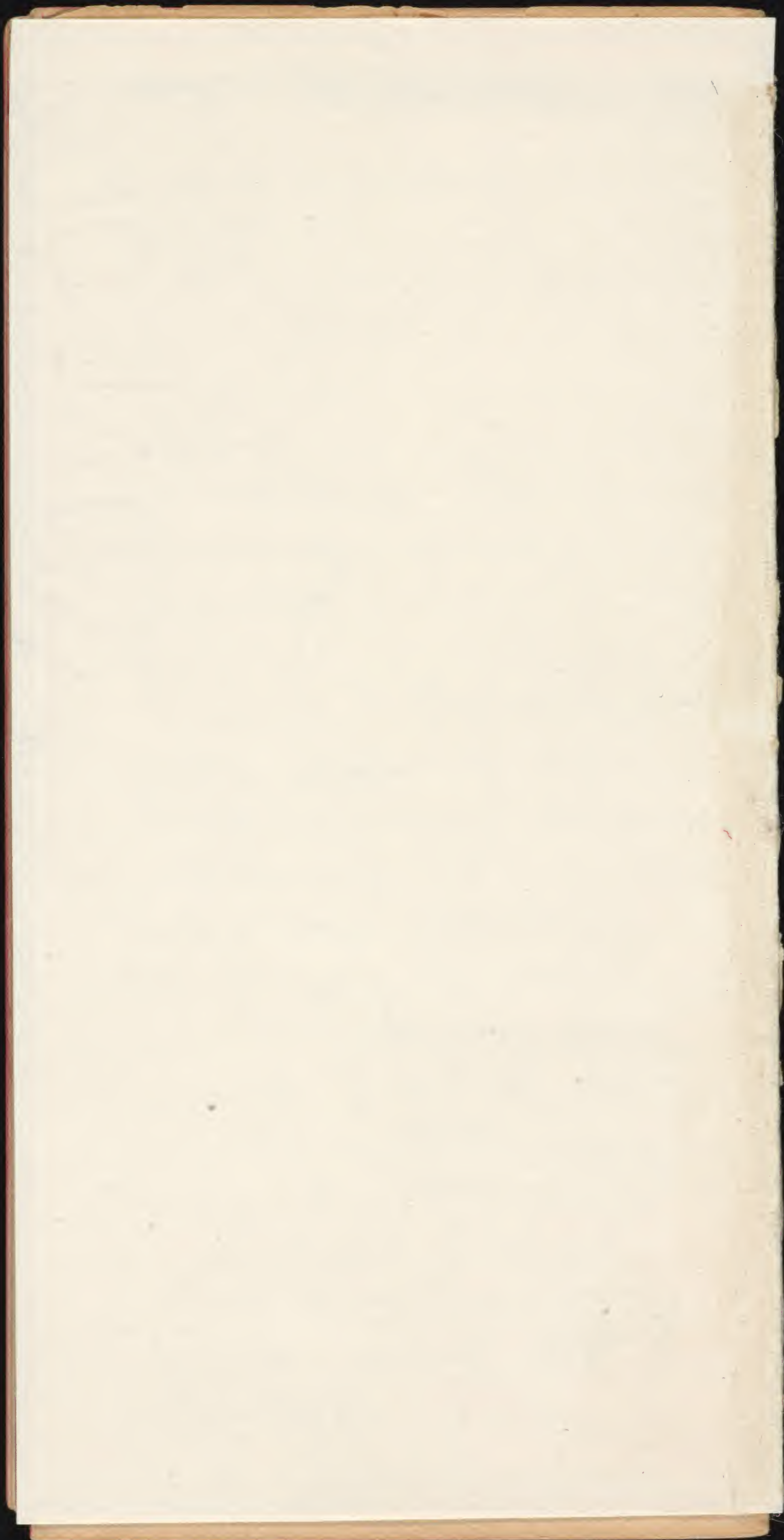
A female was

seen among the pines
in the hillsides

Turkey Buzzard

A pair of these
was seen soaring
about over the hills

Swallow



Birds seen at
Somerset. June 15, 70

Purple Martin

Chimney Swift

Catbird

Song Sparrow

Meadow Lark

Purple Grackle

Chimney

Spotted Towhee

Redwing Blackbird

Grass

Mocker

Chimney Swift

Field Sparrow

Redwing

Wing

Bluejay

Bobwhite

Catbird

Wing

B + W Creeper

Chestnut side Warbler

Desert Thrush

Solitary Tanager

Night Hawk

Cherry Bird

Grass

Wing

Wing

Blue Bird

Melrose Thrush
Cyan Goldfinch
Pursh
Black throated Green Warbler
Canadian Warbler
Hairy Woodpecker
Black cap Chickadee
Black throated Blue Warbler
Scarlet Tanager
Mourning Dove
Barn Swallow
Chipping sparrow

Providence June 16 93
Somerset Pa

Bobolink
Purple Martin
Robin
Song Sparrow
Mockingbird
Cherry Bird
R. Baltimore Oriole
Chipping Sparrow
Chickadee
Redwing Blackbird
Cathart
Field Sparrow
Chimney
Chickadee
Brown Thrush
Ruffed Grouse
Blue Jay
Crows
Scarlet Tanager
Mourning Dove
v White Billed Nuthatch
Solitary Tanager
Narrow Waker
Black throated Green Warbler
Hermit Thrush
T. Licker
Maryland Yellowthroat
Black throated Blue
Canadian Warbler
v Ruffed Grouse

Red breasted Grosbeak
Bluebird
W. Chat
Junco
Yellowthroat
V Sharp-shinned Hawk
W. Crow
Purple Finch

Sunset
June 17, 53

Meadow Lark
Rising Blackbird
Kingbird
Purple Finch
Robin
Bluebird
V Academe Flycatcher
Grass Wren
Song Sparrow
A. Goldfinch
C. Wren
Brown Towhee
C. Wren
Field Sparrow
V Chewink Warbler
C. Wren
Nuthatch
Flicker
P. Wren
V H. Lark
R. Wren
V Killdeer
V Grass Finch
V Yellow Warbler Sparrow
V Yellow Warbler
Blue Jay
Crow
V Red Headed Woodpecker
V Red shouldered Hawk

Chapman - [unclear]
Crest [unclear]
Yellow B [unclear]
Blk [unclear]
[unclear]

Harrisonville
to Jammers Cross
Roads June 21, '78

Some Canadian
Country ~~between~~
about half-way
between Harrisonville
and Jammers X Roads.
Two Canadian
Lords observed
No Campers at
the X Roads apparently
Horned Larks seen
between X Roads
and Jammers town
also Quail.

Beyond summit

Blk [unclear] Blue W
Wilson's Thrush
[unclear]
Canadian W.
Wood Thrush

Meadow Lark
Spotted Sandpiper

June 23 93
 gaughlins town
 Robin
 Crow Blackbird
 Catbird
 Mockingbird
 Field Sparrow
 Chestnut-sided Warbler
 Wren
 Red-eyed Vireo
 Chickadee
 Y.B. Chat
 Goldfinch
 Flicker
 Crow
 Field Sparrow
 Bl. Winged Crow
 Brown Creeper
 Wren
 Mt. S. Nuthatch
 Chipping Sparrow
 Yellowthroat
 Solitary Tanager
 Blk. thro. Blue gr.
 Canadian gr.
 Blk. eye Yellow gr.
 Blk. thro. Green gr.
 Redstart
 Scarlet Tanager
 Rose breasted Grosbeak
 Wilsons Thrush
 B. & W. Creeper

Black-billed Cuckoo
 Wood Pewee
 Yellow B. Cuckoo
 Meadow Lark
 Mourning Dove
 Whippoorwill

36

Loughinstown

June 24 1893

- ✓ House Wren
- ✓ Barn Swallow
- ✓ Cow Blackbird
- ✓ Earth Swallow
- ✓ Red-eyed Vireo
- ✓ Yellow Warbler
- ✓ Catbird
- ✓ Robin
- ✓ Chipping Sparrow
- ✓ Cowbird
- ✓ Chat
- ✓ Field Sparrow
- ✓ Chipping Sparrow
- ✓ Crow
- ✓ Mourning Dove
- ✓ Brown Thrasher
- ✓ Flicker
- ✓ Downy Woodpecker
- ✓ Red-eyed Vireo
- ✓ Scarlet Tanager
- ✓ Song Sparrow
- ✓ Blue Jay
- ✓ Junco
- ✓ American Crow
- ✓ Chestnut-sided
- ✓ Black-bird
- ✓ 134 or Carpenter
- ✓ Wilson's Thrush
- ✓ Woodcock
- ✓ 10 or 12 Starling

- ✓ Pewee
- ✓ Chimney Swift
- ✓ Kingbird

Langhorne, Virginia

June 25

- ✓ Yellow Warbler
- Chipping Sparrow
- House Wren
- ✓ Bluebird
- ✓ Mourning Dove
- Robin
- ~~Chipping Sparrow~~
- ✓ Redstart Blackbird
- ✓ Cowbird
- ✓ Purple Martin
- ✓ Towheebird

Langhorne, Virginia June 26

- ✓ Song Sparrow
- ✓ Yellow-rumped Sparrow
- ✓ Maryland Yellowthroat

June 26

2 miles S. Idleness
Northumberland Co Pa

- Crow
- ✓ Great Crest Flycatcher
- Yellow Warbler
- ✓ Red-eyed Vireo
- Chimney Swift
- Indigo Bunting
- Field Sparrow
- Hooded Warbler
- Green Heron
- ✓ Wood Thrush
- Whippoorwill

June 27

- Red-eyed Vireo
- Crow
- ✓ Song Sparrow
- ✓ Indigo Bunting
- ✓ Blk thro Blue Warbler
- ✓ R. W. Creeper
- ✓ Indigo Bunting
- ✓ Robin
- ✓ Least Tanager
- ✓ Rose B. Grosbeak
- ✓ Ruby thro Hummer
- ✓ Blue Jay
- ✓ Red-eyed Blackbird
- ✓ Meadow Lark
- ✓ W. B. Chat
- ✓ Flicker
- ✓ Woodpecker
- ✓ Spotted Towhee
- ✓ Redstart
- ~~Redstart~~
- ✓ American Sparrow
- ✓ Catbird
- ✓ Goldfinch
- ✓ Hummingbird
- ✓ Great Blue Heron
- ✓ Redhead
- ✓ Yellow thro Vireo
- ✓ Cardinal
- ✓ ~~Yellow thro Vireo~~
- ✓ Wetmore Crow
- ✓ Red bellied Warbler

- ✓ Ruffed Grouse
- Crow
- ✓ Brown thrasher
- ✓ Crow blackbird
- ✓ Yellow Warbler
- ✓ White thro Nuthatch
- ✓ Chestnut side PT
- ✓ Blue Golden Oriole
- ✓ Hooded Warbler
- ✓ Field Sparrow

June 28

- ✓ Yellow bellied Cuckoo
- Yellow Cuckoo
- Indigo Bunting
- ✓ Downy Woodpecker
- Robin
- Red-eyed Vireo
- Redstart
- White B Nuthatch
- Crow B Blackbird
- YB Chat
- Ruffed Grouse
- Hooded Merganser
- Least Tanager
- Redwing B Blackbird
- ✓ Red-tailed Hawk
- Chimney Swift
- Catbird
- Feeder
- B + W Creeper
- Rose B. Grosbeak
- Chestnut side W
- Blk thro Blue Warbler
- 6 Pewee
- Yellow thro Vireo

June 29

Chestnut Redwing

- ✓ Acadia Flycatcher
- Fewer
- ✓ Barn Swallow
- ✓ Chimney Swift
- ✓ Bluebird
- ✓ East Swallow
- ✓ Grass Finch
- YB Chat

Mt Union

Bobolinks common
 7 males being seen
 at one time
 Small flock of Horned
 Larks were seen
 on entering Mt Union

Lovanna Sparrow

One seen about
 3 miles below
 Mt Union

Mt Pleasant

June 30 '93

Ring-necked Pheasant
 Cow Blackbird
 Cow Bird
 Chipping Sparrow
 Song Sparrow
 Indigo Bunting
 Meadow Lark
 Flicker
 Red Headed Woodpecker
 Wood Thrush
 Purple Martin
 Barn Swallow
 Chimney Swift
 Crow
 Robin
 Catbird
 Field Sparrow
 Chewink
 Indigo Bunting
 Mockingbird
 Parula
 Kingbird
 Blue Jay
 Y B Chat
 Maryland Yellowthroat
 Oriole
 Red-eyed Vireo
 Scarlet Tanager
 Downy Woodpecker
 Blue Jay

Woodcock

Night Hawk

Tree Swallow

Belted Kingfisher

Spotted Sandpiper

Bobolink

Lincit

Yellow wing Sparrow

Bluebird

Red crest Flycatcher

House Wren

Brown Thrush

Yellow B Cuckoo

Whippoorwill

44

July 1 90.

Mt Pleasant Pa

- Purple Martin
- Chimney swift
- song sparrow
- chipping sparrow
- Robin
- Catbird
- Bluebird
- King bird
- Robin swallow
- ✓ Wood pewee
- ✓ Flicker
- ✓ Killdeer Plover
- ✓ Eye swallow
- ✓ Green Heron
- ✓ Cow Blackbird
- ✓ Redwing
- ✓ Spotted Sandpiper
- ✓ Oriole
- ✓ Cowbird
- ✓ Baltimore Oriole
- ✓ Blue Jay

Mt Pleasant Pa
July 3, '90

- ✓ Yellow Warbler
- Robin
- Catbird
- song sparrow
- chipping sparrow
- Redhead Warbler
- Downy Warbler
- Redstart
- ✓ Cowbird
- ✓ Indigo Bird
- ✓ Chickadee
- ✓ Meadow Lark
- ✓ Blue Jay
- ✓ Crow
- ✓ Chimney Swift
- ✓ Barn Swallow
- ✓ Purple Martin
- ✓ Wood Pewee
- ✓ Scarlet Tanager
- ✓ Oriole
- ✓ Wood Thrush
- ✓ Yellow B. Cuckoo
- ✓ Field Sparrow
- ✓ Chestnut side Warbler
- ✓ Cowbird
- ✓ Hooded Warbler
- ✓ Black billed Cuckoo
- ✓ Wood Pewee
- ✓ Carolina? Chickadee

Lerount Station
Papua New Guinea
July 4

Woodthrush
Robin
Cassin's
Tanager
✓ Chewy bird
Whippoorwill
Chiffchaff Sparrow
Yellow B Chat.

Lerount Station
July 5

Woodthrush
Robin
Cassin's
✓ Red-eyed Vireo
Scrubwren Warbler
Wooded Warbler
Downy Woodpecker
Cerulean Warbler
Cuckoo
E. W. Creeper
Yellow B Chat
✓ Chewy
Louisiana water-thrush
Long sparrow
Flycatcher
Academy Flycatcher
Blk thro Blue Warbler
Pewee
Redstart
Chickadee side Mt
Whippoorwill
Chimney Swift

Lansdowne Saline
July 6.

- Robin
- Cardinal
- Wood thrush
- Chipping Sparrow
- Red-eyed Vireo
- ✓ Downy Woodpecker
- ✓ Song Sparrow
- Chantrelle
- ✓ Catbird
- ✓ Wood Pewee
- ✓ Cowbird
- ✓ Redstart
- ✓ Downy Woodpecker
- ✓ Titmouse
- ✓ Scarlet Tanager
- ✓ Least Crested Flycatcher
- ✓ Crow
- ✓ Hooded Warbler
- ✓ Song Sparrow
- ✓ Field Sparrow
- ✓ Chestnut sided Wren
- ✓ Kentucky Warbler
- ✓ Blue Chantrelle
- ✓ Apple Oriole

Chesapeake
July 7

- Robin
- Red-eyed Vireo
- ✓ Song Sparrow
- ✓ Barn Swallow
- ✓ Purple Martin
- ✓ Pewee
- ✓ Indigo Bunting
- ✓ Redstart
- ✓ B & W Creeper
- ✓ Rough W. Swallow
- ✓ Catbird
- ✓ Wood Thrush
- ✓ Tanager
- ✓ Downy Woodpecker
- ✓ Kentucky Warbler
- ✓ Thrasher
- ✓ R W Creeper
- ✓ Cowbird
- ✓ Chipping Sparrow
- ✓ Spotted Thrush
- ✓ Blue Jay
- ✓ Downy Woodpecker
- ✓ Wood Thrush
- ✓ Downy Woodpecker
- ✓ Mourning Dove
- ✓ Night Hawk

Chas Page
July 5.

- Red-eyed Vireo
- Robin
- Goldfinch
- Tree Sparrow
- Chipping Sparrow
- ✓ Maryland Yellowthroat
- ✓ Chat
- Indigo Bird
- Rough winged Sw.
- Blowdown
- ✓ Ann Goldfinch
- ✓ Chipping Sparrow
- ✓ Cherry Bird
- B + W Warbler
- ✓ W B Nuthatch
- ✓ Yellow Warbler
- ✓ Wood Thrush
- ✓ Downy Woodpecker
- ✓ Flicker
- Blue Jay
- ✓ White-throated Sparrow
- ✓ Ruffed Grouse
- ✓ B W cap'd Chickadee
- ✓ Chestnut-sideded
- ✓ Chipping Sparrow
- Spotted Towhee

Compliments
July 5

- Robin
- ✓ Blue Jay
- ✓ Cow Blackbird ✓
- ✓ Red-winged Blackbird ✓
- ✓ Crows ✓
- ✓ Cherry Bird
- ✓ Chipping Sparrow
- ✓ Parula ✓
- ✓ Woodpecker ✓
- ✓ Towhee ✓
- ✓ Spotted Towhee ✓

Compliments (Luzon)

July 10

Blue bird

Ringed Plover

Cherrybird ✓

Wood Thrush ✓

Crow ✓

Swallow ✓

P.K. that Blue W.

Chimney Swift W.

B. & W. Warbler

Indigo Bird ✓

Acorn Wood

Red eye Checkered

Grass Finch ✓

Field Sparrow ✓

Canadian Warbler

Mourning Dove ✓

Scrub Wren ✓

W. W. Nuthatch

Catbird

Red head Warbler ✓

Downy Warbler ✓

Bay Breasted Warbler

Field Sparrow ✓

Robin ✓

Blue Jay ✓

Fl. Warbler ✓

Ruffed Grouse ✓

W. W. Nuthatch ✓

Wood thrush ✓

Blue Jay ✓

Wood thrush ✓

Whip-poor-will ✓

Confluence (Sugar land)

July 11, 93

- Robin
- Blue Jay
- Chipping sparrow
- Field sparrow
- Chimney Swift
- Mountain Warbler
- Flicker
- Indigo Bunting
- Red-eyed Vireo
- Chestnut side
- Indigo Bunting
- W-B Nuthatch
- Blue Jay Blue W.
- Crow
- Scarlet Tanager
- Wood thrush
- Solitary Vireo
- Woodpecker
- Downy Woodpecker
- Sugar land to Confluence

July 11

- ✓ Purple Martin
- ✓ Barn Swallow
- ✓ Crow
- ✓ Kingbird
- ✓ Cardinal
- ✓ Catbird

Continued at Rockwood

Rockwood

July 12

- Purple Martin
- Barn Swallow
- Robin
- Red-eyed Vireo
- Solitary Vireo
- Chipping sparrow
- Cardinal
- Blue Jay Blue W.
- Woodpecker
- Wilson's Thrush
- Magnolia Warbler
- Sharp-shin Hawk
- Blue Jay? Chickadee
- Crow
- Chestnut side W.
- Indigo Bunting
- Chimney Swift
- Wood thrush
- Mourning Dove
- W-B Nuthatch
- Crow
- Blue Jay
- Scarlet Tanager
- Flicker
- Ruffed Grouse 34
- Blue Jay
- Yellow B. Warbler
- Blue B. Grosbeak
- Night Hawk

Not found

Not found

Not found

Rockwood July 1

Worm-eating Warbler
Robin

Chipping Sparrow

Red-eyed Vireo

Sulphur Warbler

Canadian Warbler

Blk. thro. Bluebird

✓ Lutescent Flycatcher

✓ Pewee

Yellowthroat

Scarlet Tanager

✓ Chestnut Sapsucker

Cherry Bird

Near Rockwood

Deep for Twin

Meyersdale Pa

July 14

Purple Martin

Robin

✓ Wren

✓ Goldfinch

Long sparrow

✓ Indigo Bunting

Chipp. Sparrow

Yellow Vireo Sparrow

✓ Kingbird

Red-eyed Vireo

✓ Chestnut

Scarlet Tanager

✓ Catbird

✓ Brown Thrush

✓ Wood Thrush

✓ Wilson's Thrush

✓ Chestnut-sided Warbler

Bluebird

✓ Flicker

✓ Wren

✓ Downy Woodpecker

✓ R. B. Grosbeak

✓ May warbler W

✓ Canadian W

✓ R. B. Nuthatch

✓ Downy Woodpecker

✓ Junco Bird

✓ R. B. Creeper

• Blue Jay

Blk. thro. Bluebird

Vermilion Thrush
 Barn Swallow
 Dickcissel
 Maryland Yellowthroat
 Mourning Dove
 Winter Wren
 Field Sparrow
 Night Hawk
 W. Chat.
 Baltimore Oriole
 Cherry Bird
 Indigo Bird
 Yellow Collared Warbler

Meyers Quail Pa
 July 15

Robin
 Bluebird
 Junco
 Chipping Sparrow
 Grass Finch
 Field Sparrow
 Yellow Warbler
 Rose B. Grosbeak
 Indigo Bird
 Red Headed Woodpecker
 Flicker
 Chewink
 Catbird
 Red-eyed Vireo
 Maryland Yellowthroat
 Purple Martin
 Barn Swallow
 Goldfinch
 W.B. Nuthatch
 Brown Thrush
 Kingbird
 Chat
 Chestnut side W.
 Canadian W.
 Wood Thrush
 Redstart
 Indigo Bird
 Blue Jay
 Turkey Vulture
 C. W.

43

- ✓ Blue yellow back Warbler
- ✓ Common Warbler
- ✓ Name Warbler
- ✓ Winter Wren
- ✓ 13400 Warbler
- ✓ Wood Thrush
- ✓ Wilson's Thrush
- ✓ Blue backed Thrush
- ✓ Blue cap Chickadee
- ✓ Small billed Nuthatch
- ✓ Wood Pewee
- ✓ Hudson's Warbler 57